UNITED STATES OFFICE OF PERSONNEL MANAGEMENT
Washington, DC 20415

April 29, 2024

Memorandum For Chief Human Capital Officers

From: Veronica E. Hinton, Associate Director

Subject: The Artificial Intelligence Classification Policy and Talent Acquisition Guidance - The AI in Government Act of 2020

The U.S. Office of Personnel Management (OPM) is working to implement specific requirements of Public Law 116-260, The AI in Government Act of 2020 (the Act). In accordance with the Act, OPM is required to (1) issue regulations that identify key skills and competencies needed for Artificial Intelligence (AI) professionals in an agency; (2) establish a new occupational series, or update and improve an existing occupational series, for AI work within an agency; (3) estimate the number of AI employees in positions related to AI, by agency; and (4) prepare a 2- and 5-year forecast of the number of Federal employees in positions related to AI that each agency will need to employ. To fulfill these requirements, OPM is conducting an occupational study on AI work and is releasing the Artificial Intelligence Classification Policy and Talent Acquisition Guidance for agency use and comments. This guidance also supports talent management efforts, such as government-wide skills-based hiring focused on AI, data, and technology talent, in compliance with Executive Order 14110 on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence (AI Executive Order) issued by the White House on October, 30, 2023.

The OPM AI Policy Guidance meets the requirements of the Act and the AI EO and will be used to help agencies hire and retain a highly skilled AI workforce. AI is an evolving area and positions may be classified in a number of different occupational areas (e.g., data science, data analysis, mathematics, software engineer, IT, data management, AI) based on the nature of the work and agency mission. AI work is multidisciplinary and may be found in one or more occupational series, supporting the creation of the policy guidance to support flexibility aligned with Federal agencies AI policy needs.

AI work involves designing and developing systems capable of performing tasks that includes the use of machine learning and natural language processing to create, deliver, and maintain algorithms, large language models and systems that can process and analyze data used to make intelligent decisions or predictions. The issuance of the policy guidance authorizes the use of *Artificial Intelligence* or *AI* as a parenthetical title for other occupations that perform AI work the majority of the time, and not as a collateral duty. Additional titling guidance and instructions on identifying AI positions is included in the policy guidance.

We encourage all agencies to conduct a general review of your agency positions covered by this policy guidance and provide feedback to us. We rely on agency human

resources officials with covered positions to ensure subject matter experts and program management officials are aware of the release of this guide and to seek their input. We depend on your input to assist us in making the appropriate adjustments to ensure the policy guidance meets your needs. We are providing a 30-day comment period. During the comment period the policy guidance may be implemented by Federal agencies. Accordingly, please provide your comments in response to the attached request by Wednesday, May 29, 2024.

We appreciate your assistance with developing policy in line with the requirements of the AI in Government Act of 2020 and the AI Executive Order. For additional information, please refer to the attached artificial intelligence occupational study frequently asked questions (FAQs). Should you have any questions about OPM's AI occupational study, please contact Classification and Assessment Policy at fedclass@opm.gov.

Attachments: Artificial Intelligence Occupational Study (FAQs), and Request for Comment Instruction (see below)

Cc: Deputy CHCOs, Human Resources Directors, CXO Councils

The Artificial Intelligence Classification Policy and Talent Acquisition Guidance Frequently Asked Questions (FAQs)

1. **What is OPM's role under Public Law 116-260, The AI in Government Act of 2020 (the Act)?**

   The AI in Government Act of 2020 requires OPM to identify key skills and competencies needed for AI professionals in an agency; establish a new occupational series, or update and improve an existing occupational series, for artificial intelligence work within an agency; estimate the number of AI employees in positions related to AI, by agency; and prepare a 2- & 5-year forecast of the number of Federal employees in positions related to AI that each agency will need to employ. Developing a policy guide for AI work is a key step towards ensuring Federal agencies can attract, recruit, and hire skilled employees to accomplish AI work.

2. **What efforts has OPM completed to meet the requirements of the Act?**

   OPM is issuing the AI Policy Guidance for agency use and comments. AI work involves designing and developing systems capable of performing tasks that includes the use of machine learning and natural language processing to create, deliver, and maintain algorithms, large language models and systems that can process and analyze data used to make intelligent decisions or predictions.

   AI work involves a combination of mathematics, statistics, computer science, and/or domain-specific knowledge, depending on the specific area of application. AI can be extended, but is not limited to U.S. national security, defense, infrastructure, manufacturing, natural resources, financial services, transportation, healthcare, energy, food, and/or agriculture. AI work is performed in multiple occupations aligned with agency's missions and needs. The work is multidisciplinary in nature and is not limited to one occupational series.

   On July 6, 2023, OPM issued a memorandum titled, "The AI in Government Act of 2020 – Artificial Intelligence Competencies." OPM identified 43 general competencies and 14 technical competencies that have been identified through an environmental scan and stakeholder engagement activities including surveys and focus groups for Artificial Intelligence work. OPM also completed requirements to estimate the number of AI employees in positions related to AI by agency and prepared a 2- & 5-year forecast of the number of Federal employees in positions related to AI that each agency will need to employ. The latter was coordinated separate from this release.

Next steps for AI-related efforts will include issuing a validated AI competency model to support Federal agency talent acquisition efforts to further support the AI in Government Act of 2020 and other AI requirements.

3. **What is OPM's role under Executive Order 14110 on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence (AI Executive Order)?**

   The AI Executive Order requires OPM to establish guidance and policy on skills-based, Federal Government-wide hiring of AI, data, and technology talent in order to increase access to those with nontraditional academic backgrounds to Federal AI, data, and technology roles.

4. **How will the AI Policy Guidance help agencies attract, hire and retain Artificial Intelligence employees?**

   OPM is issuing this policy guidance for AI positions to help agencies attract, hire, and retain a highly skilled AI workforce. This policy guidance addresses position classification, job evaluation, qualifications, and assessment for AI positions. Agencies may use this guidance to inform their classification, recruitment and hiring efforts of AI talent for their agencies to meet their mission critical needs.

5. **How should Federal agencies distinguish AI positions from other work in the agency?**

   The AI Policy Guidance includes a description of AI work roles, illustrations, and criteria for agencies to apply to identify AI positions. The criteria require the following as outlined on pages 25 - 26 of the guidance:

   In summary, the work is considered AI work when:

   1) The work aligns with the AI definition;
   2) AI work is performed on a regular and continuous basis;
   3) AI work is a significant and substantial part of the overall position (i.e., occupying at least 25 percent of the employee's time); and
   4) The higher-level AI knowledge and skills needed to perform the work would be required in hiring for the position (aligned with technical competencies issued by OPM on July 6, 2023).

6. **What is the timeframe for agencies to review their AI positions and implement the new policy guidance?**

   Collaboration between agency Human Resources and Program Managers is needed to fully implement the new policy guidance. A review of positions using this

guidance along with other appropriate policy guidance will determine the updates needed to your positions. Each agency should also determine if an analysis of work is required as well. Typically, agencies are required to implement new OPM classification policy one year after issuance. You should contact your agency classification servicing offices for application questions. Agency headquarters or classification chiefs may contact OPM at fedclass@opm.gov for questions on the implementation of the AI policy guidance.

Request for Comments - Artificial Intelligence Classification Policy and Talent Acquisition Guidance

Please provide your comments and suggestions by Wednesday, May 29, 2024.

Significant Considerations

1. This policy guidance serves as supplemental guidance to help agencies hire and retain a highly skilled AI workforce**.**

2. AI is an evolving area and positions may be classified in a number of different occupational series based on the nature of the work.

Information We Need from Agencies with Covered Positions

Subject matter experts and human resources officials in agencies should answer the following questions about the AI policy guidance:

1. Is the proposed definition of AI work appropriate, clear, and concise? If not, please briefly explain what changes are recommended.

2. Is the proposed parenthetical title appropriate and sufficient? If not, please provide recommended title(s) and written justification.

3. Are additional illustrations needed? If so, please describe what additional illustrations you would like OPM to add.

4. Do you have any additional comments or proposed revisions to the policy guidance regarding AI work? If so, please provide your additional comments or proposed revisions and written justification.

How Do You Submit Comments?

In response to the requests outlined above, we would like to receive both:

(a) Comments representing the agency's overall feedback, and

(b) Representative comments from subject matter experts and subordinate locations/organizations.

Please send your electronic comments as an email attachment to fedclass@opm.gov by Wednesday, May 29, 2024.

Please note: Each response must cover an entire agency. Therefore, departments and independent agencies must consolidate information from all of their components or bureaus before sending comments to OPM.

Artificial Intelligence (AI) Classification Policy and Talent Acquisition Guidance

U.S. Office of Personnel Management

APRIL 2024

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Introduction

U.S. Office of Personnel Management (OPM) has the overall responsibility for establishing the basic policies and guidance governing the classification system. Under title 5 Chapter 51, OPM must prepare and publish position classification standards as a means of implementing the classification system. The criteria in these standards must be based on the principles and concepts outlined in the law. In support of our process, OPM regularly conducts an environmental scan, administers a governmentwide workforce survey, holds focus groups with technical and human resources subject matter experts to identify key skills and competencies governmentwide, and analyzes all results to identify required information that will contribute to the final policy. OPM's studies are also informed by data collected from academia, the private sector, Federal agencies, and other credible sources.

OPM is issuing this policy guidance for Artificial Intelligence (AI) positions to help agencies attract, hire, and retain a highly skilled AI workforce. This guidance supports The AI in Government Act of 2020 (the Act), Public Law 116-260, that required OPM to identify key skills and competencies needed for positions related to AI and establish a new job series, or update and improve an existing job series, for AI professionals within an agency.

On July 6, 2023, OPM, in collaboration with the Office of Science and Technology Policy (OSTP), issued a memo, The AI in Government Act of 2020 – Artificial Intelligence Competencies, identifying both general and technical competencies for AI work governmentwide**.** To fulfill the requirements of the Act related to position classification, OPM is now releasing The Artificial Intelligence Classification Policy and Talent Acquisition Guidance for agency use. This guidance addresses position classification, job evaluation, qualifications, and assessment for AI positions. OPM's issuance of this guidance will help agencies to:

- Identify AI positions;
- Clarify AI roles and duties;
- Address position management issues;
- Recruit, hire, and develop a qualified AI workforce to meet their agency needs;
- Implement training, performance, and retention programs; and
- Conduct AI workforce assessments.

OPM worked with lead agencies and other Federal stakeholders to gain a better understanding of the AI workforce governmentwide. This effort included representatives from OPM, the Department of Defense (DOD), the Office of Science and Technology Policy (OSTP), the Office of Management and Budget (OMB), the Department of Commerce's National Institute of Standards and Technology (NIST), the Department of Homeland Security (DHS), and the Chief Human Capital Officers (CHCO) Council. OPM also conducted research including the collection and analysis of data from industry and academia to inform the development of this guidance.

This guidance also supports Executive Order 13859 – Maintaining American Leadership in Artificial Intelligence, signed on February 11, 2019 – that aims to establish principles and strategies to strengthen the nation's capabilities in AI to promote scientific discovery, economic competitiveness, and national security. Furthermore, this guidance supports talent management efforts in compliance with Executive Order 14110 on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence issued by the White House on October 30, 2023.

Background

AI has been described as a tool with the potential to change and possibly transform every sector of the U.S. economy and society. The Federal Government must continue to advance research and develop standards and education activities in AI through coordination and collaboration among government, academia, and the private sector to leverage the intellectual, physical, and digital resources of each stakeholder. OPM initiated an occupational study to explore AI work in the Federal Government and to specifically meet the requirements outlined in the National Artificial Intelligence Initiative, which was included in the National Artificial Intelligence Act, enacted in the National Defense Authorization Act for Fiscal Year 2021.

The National Artificial Intelligence Initiative provides for a governmentwide coordinated program to accelerate AI research and application. The goal of the National AI Initiative is to ensure that the U.S. continues its leadership in AI research and development. The work under this Initiative is organized into six strategic pillars – Innovation, Advancing Trustworthy AI, Education and Training, Infrastructure, Applications, and International Cooperation, as provided below:

- **Innovation -** AI research and development (R&D) will continue to keep the Federal Government on the cutting-edge of technologies that will generate innovative methods of doing business, empower workers, and increase national security.

- **Advancing Trustworthy AI -** AI technologies must reflect attributes like accuracy, privacy, consistency, vigor, resilience, and security against attacks while mitigating bias.

- **Education and Training -** With added AI systems, Federal agencies need to build effective education, training, upskilling, and reskilling systems.

- **Infrastructure -** The White House Office of Science and Technology Policy (OSTP) and National Science Foundation (NSF) have formed the National AI Research Resource (NAIRR) Task Force. This task force will propose a plan and roadmap for establishing and sustaining the resource.

- **Applications -** Federal agencies contribute to the research, development, and use of AI in a wide range of functions. The efforts lead to improved healthcare, more efficient transportation, significant scientific discoveries, improved manufacturing, increased agricultural crop yields, better weather forecasting, and more.

- **International Cooperation -** The Federal Government is committed to developing AI technology with an approach consistent with American values and interests. The United States boosts international AI collaborations and partnerships grounded in evidence-based methodologies, analytical research, and multi-stakeholder activities to get diverse positions.

In addition to this major initiative, OPM continues to partner with agencies and other key stakeholders in support of efforts to strengthen AI capabilities governmentwide. Please refer to Appendix C for an overview of the AI directives issued governmentwide.

How is AI Defined?

The AI in Government Act of 2020 required OPM to establish or update classification policy for AI work. A critical part of developing AI classification policy was identifying the AI work performed governmentwide to establish a definition of AI work for consistent use throughout the Federal Government. OPM explored various AI definitions and workforce models and issued an AI workforce survey to identify AI talent governmentwide. There are numerous definitions available for AI, including the definitions provided below. In addition to the definitions found from various sources, including the AI Act and AI E.O., OPM developed a definition of AI work based on the existing definitions of AI and an environmental scan.

The AI in Government Act of 2020

The AI Act of 2020 (AI Act)[1] was enacted to facilitate the adoption of AI technologies in the Federal Government. The act aimed to help ensure public trust in the applications of AI technologies. The law's intent is to benefit and help the government with informational resources to recruit and retain talented AI professionals.

The AI Act defined AI as a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. AI systems use machine and human-based inputs to:

- Perceive real and virtual environments.
- Abstract such perceptions into models through analysis in an automated manner.
- Use model inference to formulate options for information or action.

Executive Order (EO 14110) on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence[2]

The term "artificial intelligence" or "AI" is defined in 15 U.S.C. § 9401(3) as a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments. AI systems use machine- and human-based inputs to perceive real and virtual environments; abstract such perceptions into models through analysis in an automated manner; and use model inference to formulate options for information or action.

In addition to the AI Act and E.O., the AI Framework[3] developed by GAO informed the development of classification policy. This framework is organized around the four principles of governance, data, performance, and monitoring. For each principle, the framework describes key practices for Federal agencies and other entities considering, selecting, and implementing AI systems. The framework was developed to help ensure accountability and responsible AI use by Federal agencies and other entities involved in the design, development, deployment, and continuous monitoring of AI systems.

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[1] Artificial Intelligence in Government Act of 2020, H.R.2575 -116th Congress (2019-2020): AI in Government Act of 2020 | Congress.gov |Library of Congress and 15 U.S.C. § 9401(3))

[2] Executive Order 14110 on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence, Published October 30, 2023

[3] Adapted from U.S. Government Accountability Office, Published June 30, 2021

In support of the requirements of the AI Act, OPM conducted a comprehensive study including fact-finding activities, data analysis, and stakeholder engagement with Federal agencies and leveraged academia and industry data and AI experts. An environmental scan was conducted to explore classification of, and competencies and tasks needed for the performance of AI work. This work informed the development of the AI definition.

OPM found that AI work is performed in over 29 occupational series and most definitions described AI systems rather than AI work. AI work involves the tasks performed by AI employees as well as the impact of AI on preexisting work. The development of this guidance will inform both how AI positions are classified and identify the impact AI will have on work. The foundation for establishing classification policy for AI work is developing a definition for consistent use throughout the Federal Government. OPM is prescribing the following definition of AI work for governmentwide use to assist Federal agencies in identifying AI positions regardless of occupational series.

OPM Artificial Intelligence Definition

OPM defines AI work as involving the design and develop of systems capable of performing tasks that includes the use of machine learning and natural language processing to create, deliver, and maintain algorithms, large language models and systems that can process and analyze data used to make intelligent decisions or predictions.

AI work involves a combination of mathematics, statistics, computer science, or domain-specific knowledge, depending on the specific area of application. AI can include but is not limited to U.S. national security, defense, infrastructure, manufacturing, natural resources, financial services, transportation, healthcare, energy, food, and agriculture.

Additional terminology can be found in the NIST, The Language of Trustworthy AI: An In-Depth Glossary of Terms.

AI Characteristics

In addition to the definition above, AI work includes key characteristics as described by individuals performing the work, the competencies needed to perform the work, the roles and responsibilities in AI work, and examples of work roles within agencies as provided below.

AI Work

AI is rapidly changing our world and has significant potential to transform not only society and people's lives (U.S. Government Accountability Office, 2023)[4] but also how work is performed in the Federal Government and the services provided to the American people. Accordingly, remarkable surges in AI capabilities have led to a wide range of innovations that will enhance the capabilities of government agencies to improve operations and services. Given the rapid growth in capabilities and widespread adoption of AI, the Federal Government must manage its use of AI in a responsible way to minimize risk and strategically align human capital needs with goals and policy related to AI needs.

Federal employees performing AI work come from various disciplines and represent numerous occupational series. OPM's study found that AI work is multidisciplinary. The work can be performed in various occupational series and can be classified in professional and non-professional positions. AI work can be performed by data scientists, software developers, data analysts, and others with expertise or focus on AI technologies. OPM defines multidisciplinary work as a position involving duties and responsibilities closely related to more than one discipline. As a result, the position is classifiable to two or more occupational series including professional (1560 series) and nonprofessional (0343) work based on the specific knowledge, skills, and abilities required by the individual position. The nature of the work is such that persons with training and experience in two or more occupations may often be considered well-qualified to do the work (Interpretive Guidance for Cybersecurity Positions, pp 21-22).

AI assigned technologies enable computers to act or react like a human being. The machine executes commands programmed by a programmer. In other words, the human AI programmer creates the "brain power" of the computer. Code is written so the computer can recognize activities and produce a human-like response. AI enhances productivity because the computer, using human logic, can sort through thousands of files to analyze information. Tasks that could take many hours, days, or weeks for the average human being are achieved in minutes using AI. AI can allow for

[4] U.S. Government Accountability Office. (2023, December 12). *Artificial Intelligence: Agencies Have Begun Implementation but Need to Complete Key Requirements*. Retrieved from : https://www.gao.gov/products/gao-24-105980)

better safety, vision, and direction in the workplace. Because AI is evolving how work is performed, the Federal Government must be competitive in recruiting, hiring, training, and retaining the future workforce. There is a great deal of competition for the best talent since employees with AI skills can make one entity stand out far beyond another. The skills needed to perform AI work are very specific. Because of the rapid evolution and high demand for workers, categorizing and identifying the work is paramount to the development of AI policy and talent management.

Through the AI workforce identification survey, and a comprehensive environmental scan, including agency information received from supervisors who perform AI work and their employees' work, OPM concluded that establishing a new job series or updating one or more occupational series, would be limiting to agencies to meet their mission and needs. Federal agencies will have more flexibility to determine the appropriate series to design jobs, and organizations based on the hiring necessary to meet their mission and workforce needs.

Of the 29 identified occupational series, the top series that emerged as commonly used for classifying AI work were the 2210 Information Technology Management Series, the 0343 Management and Program Analysis Series, and the 1560 Data Science Series. According to the workforce survey respondents, these job series aligned with agency missions.

In addition to the job series analysis, a comprehensive environmental scan, participants' responses, focus group information, and subject-matter expert (SME) panel data, OPM issued The AI in Government Act of 2020 – Artificial Intelligence Competencies | CHCOC memo identifying both AI general and technical competencies. These competencies will inform the development of a validated AI Competency Model and the competency-based policy to be released at a future date.

See Appendix B for tables with 43 general competencies and 14 technical competencies that were identified through an environmental scan for AI work. Examples of technical competencies for AI work include Artificial Intelligence and Machine Learning, Modeling and Simulation, Data Extraction and Transformation, and Mathematics and Statistics. Additional AI competencies including general competencies are included in Appendix B.

OPM AI Competency Model

Concurrent to this guidance, OPM finalized a validated governmentwide competency model for AI work to be used governmentwide for workforce planning, recruitment,

employee selection, training and development, and performance. The competency model includes general and technical competencies for AI work. Similarly, agencies will need to determine the applicability of these competencies to positions performing AI work.

All positions with AI responsibilities apply common knowledge, skills, and abilities (KSAs) or competencies, as organized into two areas:

- General competencies or KSAs - reflect the cognitive and social capabilities (e.g., problem solving and interpersonal skills) required for job performance in a variety of occupations.; and

- Technical competencies or KSAs - are more specific than general competencies, as they are tailored to the particular knowledge, skills, and ability requirements necessary for a specific job.

OPM defines a competency as a measurable pattern of knowledge, skills, abilities, behaviors, and other characteristics that an individual needs to perform work roles or occupational functions successfully. Competencies specify the "how" of performing job tasks, or what the person needs to do the job successfully (Shippman et al., 2000)[5].

Competencies represent a whole-person approach to assessing individuals. Competency-based assessments test whether applicants meet the standards of performance required for a given job. Competencies tend to be either general or technical. General competencies reflect the cognitive and social capabilities (e.g., problem solving, interpersonal skills) required for job performance in a variety of occupations. On the other hand, technical competencies are more specific as they are tailored to the particular knowledge and skill requirements necessary for a specific job. OPM has conducted a number of occupational studies to identify competencies for many Federal occupations. These competencies are available on OPM's website at Competencies (opm.gov).

To help the Federal Government recruit and train more AI talent, OPM released for immediate use general and technical AI competencies.[6] Agencies can use the AI

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[5] Shippman, J. S., Ash, R. A., Carr, L., Hesketh, B., Pearlman, K., Battista, M., Eyde, L. D., Kehoe., J., Prien, E. P., & Sanchez, J. I. (2000). The practice of competency modeling. Personnel Psychology, *53*(3), 703-740. - Shippman, J. S., Ash, R. A., Carr, L., Hesketh, B.,... - Google Scholar

[6] The AI in Government Act of 2020 – Artificial Intelligence Competencies (chcoc.gov)

competencies to select, assess, and train AI talent as confirmed by a job analyses. Agencies are responsible for conducting job analyses for work within their agency. See5 C.F.R § 300.103. Similarly, agencies must determine the applicability of these competencies to positions within their agency. Please refer to OPM's Delegated Examining Operations Handbook for more information on conducting a job analysis, as well as the Job Analysis section of OPM's Assessment and Selection website.

OPM's validated AI competency model supports Federal agency talent acquisition efforts. Agencies may use this validated competency model to support job analysis for recruitment, selection, and hiring. **See** Appendix B for KSAs or competencies and definitions for all five occupations.

AI Roles and Responsibilities

OPM explored various AI roles governmentwide using data collected from agencies and USAJobs. Supervisors were responsible for identifying the different roles of the AI workforce based on the duties and responsibilities of the position. AI work involves numerous occupations that include different disciplines. Because AI work crosses multiple occupational series, the role of AI differs across positions. These roles, for example, are driven by an agency's mission as it relates to AI and thus influence what constitutes sound position management of an agency's AI workforce.

Federal agencies have identified AI work roles governmentwide and other characteristics of AI work. OPM identified specialty areas associated with work roles identified by Federal agencies. Some of these work roles are similar to titling guidance provided in OPM Position Classification Standards or unofficial titles agencies may use. Examples of AI Work Roles are provided below:

Artificial Intelligence Work Roles

This section includes examples of the Specialty Areas, Work Roles, and Work Role Definitions for AI work. Work roles reflect titling from USAJobs and the DoD Cyber Workforce Framework. For titling guidance, please refer to the 'Determining Official Position Title' section below.

Specialty Area	Work Role	Work Role Definition
Analyst	Foreign Partnerships Analyst	Coordinates details and prepares data, analytics, and AI engagements with international, interagency, industry, and academic counterparts. Performs research and analyzes international partnerships focusing on data, analytics, and AI cooperation.
Artificial Intelligence	AI Adoption Specialist	Facilitates AI adoption by supporting the users of AI-enabled solutions.
	AI Innovation Leader	Builds the organization's AI vision and plan and leads policy and doctrine formation, including how AI solutions can or will be used.
	AI or ML Specialist	Designs, develops, and modifies AI applications, tools, and other solutions to enable successful accomplishment of mission objectives.
	AI Risk and Ethics Specialist**	Educates those involved in the development of AI and conducts assessments on the technical and societal risks across the lifecycle of AI solutions from acquisition or design to deployment and use.

Specialty Area	Work Role	Work Role Definition
	Artificial Intelligence Senior Science Advisor	Serves as a technical thought leader to shape strategies and advises managers on projects and initiatives related to AI and machine learning.
	Artificial Intelligence Technical Advisor	Performs quantitative analysis, machine learning, statistical modeling, and software development to analyze data and solve problems. Explores innovative research and maintain and gain the technical edge required for projects. Support software analytics and results.
	Artificial Intelligence Senior Science Advisor	Serves as a technical thought leader to shape strategies and advise managers on projects and initiatives related to AI and machine learning.
	AI Test and Evaluation Specialist	Performs testing, evaluation, verification, and validation on AI solutions to ensure they are developed to be and remain robust, resilient, responsible, secure, and trustworthy; and communicates results and concerns to leadership.

Specialty Area	Work Role	Work Role Definition
	Interdisciplinary Engineer (Artificial Intelligence)	Understand and deploy embedded hardware processing solutions to include System-on-Chip (SoC), Peripheral Component Interconnect Express (PCIe)-based, and neuromorphic designs. Design and implement signal and image processing algorithms as well as AI and Machine Learning solutions that address agency needs such as neural networks and computer vision applications. Create, integrate, and maintain real-time high-bandwidth process systems to facilitate data collections and experiments in different environments and geographic locations. Implement or optimize software algorithms at multiple scales of computation. Assess the performance of various algorithms and applications across a spectrum of hardware and processing chips, cards, and computing platforms. Oversee the technical execution of hardware and firmware design and development efforts with industry and academic partners.
Data	Interdisciplinary Data Scientist (Advanced Analytics)	Leads projects from ideation through deployment to develop advanced analytics capabilities determining leading practices.

Specialty Area	Work Role	Work Role Definition
		Applies and combines diverse data science techniques including Machine Learning, natural language processing, AI, geospatial analyses, graph-based network modeling, advanced visualizations, descriptive statistics, and other statistical, mathematical, and analytical methods to produce cohesive, user-centric solutions. Data science tools, including scripted languages such as R, Python, SQL, and Java Scripts; Integrated Development Environment (IDE) and analytics platforms such as RStudio, SageMaker, RapidMiner, SAS, and Domino Data Lab; open-source solutions ; commercial off-the-shelf tools; and hardware-based capabilities.
Healthcare and Data	Health Scientist (AI)	Advises on the use of data science tools, methods, and statistical learning models to collect, link, process, code, classify, and analyze public health surveillance. Serves as an expert in work groups focused on data science and machine learning as applied to public health data. Collaborates with other professionals to conduct surveillance, research, and analytical studies.

Specialty Area	Work Role	Work Role Definition
Research and Engineering	Research Agricultural Engineer	Improves the quality of the data that can be obtained through UAS (Unmanned Aerial Systems), while decreasing the time and costs of operating research units. Provides scientific and technical leadership to develop innovative concepts, strategies, and methodologies to advance UAS use and standardization in Agriculture.
Tech	IT Specialist (Data Management)	Leads the development, integration, and installation of databases, data integration solutions, and programmatic solutions for management, organization, and transformation of data outside of databases. Provides guidance in the design of databases and data services to ensure optimization, efficiency, and sustained operations. Performs senior-level advisory support for systems analysis and feasibility studies to define concepts and design specifications for new or existing databases, content management capabilities, and data services. Coordinates with contractors, systems developers, and programmers to update, enhance, and change databases, data services, and content management capabilities.

Specialty Area	Work Role	Work Role Definition
		Serves as a technical advisor on testing and promotes the integration of new databases and data services within the existing IT infrastructure. Creates test plans and scenarios and executes and documents database and data service test activities. Leads project(s) to develop and implement new data management schemas, taxonomies, and ontologies. Guides the analysis, evaluation and providing of recommendations on new, current, and planned data management and database technologies and architectures. Coordinates the assessment of current trends and determines the impact of emerging technologies upon the existing infrastructure. Leads the design, development, and implementation of most complex projects designed to provide capabilities to manage secure multiple domain access to virtual intelligence and business databases, warehouses, and data stores. Researches and assesses data, AI, machine learning, and autonomy requirements, associated programs, and applications

Specialty Area	Work Role	Work Role Definition
		(collectively referred to as data or AI).
Tech and Cyber	Attorney (Tech and Cyber)	Providing legal advice and policy counsel leadership on complex areas of law affecting the duties and responsibilities under authorities including the National Security Act and Executive Orders. Trains on a variety of laws and policies for collection of intelligence, employment and anti-discrimination laws, and government ethics. Maintain productive working relationships with other Intelligence Community elements, Federal agencies, congressional committees.

Artificial Intelligence Classification Policy Guidance

Artificial Intelligence Classification

The AI in Government Act of 2020 requires OPM to issue regulations that identify key skills and competencies needed for AI professionals in an agency; and establish a new occupational series, or update and improve an existing occupational series, for AI work within an agency. OPM is providing the following guidance for classifying AI work in the Federal Government.

Based on OPM's collaboration with our agency partners and critical work with stakeholders, the data and information collected indicates AI work in the Federal Government is found across a variety of occupational series. Therefore, AI work can be characterized as multidisciplinary. A multidisciplinary position is a position involving duties and responsibilities closely related to more than one discipline. As a result, the position could be classifiable to two or more occupational series. The nature of the work is such that persons with training and experience in two or more occupations may be considered well-qualified to do the work. (See section **Determining Occupational Series of Positions with Artificial Intelligence Work** for additional information on multidisciplinary positions).

All positions performing AI work must align with the following definition:

AI work involves designing and developing systems capable of performing tasks that includes the use of machine learning and natural language processing to create, deliver, and maintain algorithms, large language models and systems that can process and analyze data used to make intelligent decisions or predictions.

AI work involves a combination of mathematics, statistics, computer science, or domain-specific knowledge, depending on the specific area of application. AI can be extended, but is not limited to U.S. national security, defense, infrastructure, manufacturing, natural resources, financial services, transportation, healthcare, energy, food, and agriculture.

AI work must also entail the general and technical skills and competencies identified by OPM in the CHCO memo – **Artificial Intelligence Competency Model**.

Agencies may use 'Artificial Intelligence or AI' as a parenthetical title for all occupational series performing artificial intelligence work the majority of the time, and not as a collateral duty. (See section **Parenthetical Titles**).

In summary, the work is considered AI work when:

The work aligns with the AI definition;

AI work is performed on a regular and continuous basis;

AI work is a significant and substantial part of the overall position (e.g., occupying at least 25 percent of the employee's time); and

The higher-level AI knowledge and skills needed to perform the work would be required in hiring for the position (aligned with the competency model issued by OPM on April 29, 2024).

Classifying Positions with Artificial Intelligence Work

When classifying a position, the following must be determined:

- The proper pay system;
- The proper occupational series;
- The official position title; and
- The proper grade or level of work.

Determining the Pay System

Positions with AI responsibilities usually are General Schedule (GS) positions. However, some positions may be Senior Executive Service (SES) positions, Senior Level (SL) or Scientific and Professional (ST) positions. Guidance for identifying such positions above the GS-15 grade level can be found later in this section. This guidance is not intended for Federal Wage System (FWS) positions.

Note: The classification of a position is used to determine certain pay entitlements of an employee in that position. Agencies should remain aware that changes in the pay

system, occupational series, title, or grade level of a position could affect how an employee in that position will be paid. For example, coverage under special rates established under 5 U.S.C. § 5305 and 5 C.F.R. part 530, subpart C, is dependent on the position's pay system, occupational series, grade level, and, at times, official title.

Determining Occupational Series of Positions with Artificial Intelligence Work

The AI workforce is occupationally multi-faceted, and encompasses a variety of contexts, roles, and occupations. The AI workforce comprises a cadre of different backgrounds and experiences to perform the AI work required by agencies. When AI work is included in established occupations or covered by more than one occupational series, a classification determination can be made by reviewing the duties and responsibilities assigned to the position. In most instances, the primary work of the position, the highest level of work performed, and the paramount occupational knowledge for the work dictate the appropriate series.

Users of the position classification standards normally have little trouble making the series decision by comparing the characteristics of the position in question to series definitions and occupational information in the standards. However, if the work of a position falls into more than one series, the correct series is sometimes difficult to determine. If it is unclear whether a particular series predominates, consider the following to determine the appropriate series:

- **Paramount occupational knowledge required.** Some positions may include several different kinds of work; however, most positions have a paramount occupational knowledge requirement in addition to the knowledge, skills, and abilities/competencies. The paramount occupational knowledge is the most important subject matter knowledge or subject-related experience required to do the work.

- **Reason for existence.** The primary purpose for the existence of the position, or management's intent in establishing the position, is a positive indicator in determining the appropriate series.

- **Organizational mission and/or function.** Since AI is critical work within an organization, it may generally be aligned with the mission and function of the organization to which they are assigned. The organization's function often is mirrored in the organizational title and may influence the choice of appropriate series.

- **Recruitment source.** Supervisors and managers can help by identifying the occupational series that provides the best qualified applicants to do the work. This aspect correlates with the paramount knowledge required by the position.

AI work can be characterized as multidisciplinary. A multidisciplinary position is a position involving duties and responsibilities closely related to more than one discipline. As a result, the position could be classifiable to two or more occupational series. The nature of the work is such that persons with training and experience in two or more occupations may be considered well-qualified to do the work.

Note: Due to the evolution of work in AI, the term multidisciplinary is used to define the unique combinations of work involving more than one discipline. While this term is not addressed in the current Introduction to the Position Classification Standards or the Classifier's Handbook, future updates will address the usage of this terminology.

Multidisciplinary positions generally fall into one of the following two categories:

- Positions which involve a specific combination of knowledges that is characteristic of two or more non-professional or professional series. Such positions involve the performance of some duties which are characteristic of one series and other duties which are characteristic of another series.

- Positions which involve knowledge which is characteristic of either two or more non-professional or professional series. These positions include work which is substantially identical to work performed in either of the non-professional or professional occupations.

AI work may also be interdisciplinary, meaning the work may be classifiable in two or more professional series. The difference between multidisciplinary positions and interdisciplinary positions is that interdisciplinary positions only include professional work. When a position is determined to be interdisciplinary, the position description should show clearly that the position is interdisciplinary and indicate the various series in which the position may be classified. When the position is interdisciplinary, the final classification of the position is determined by the qualifications of the person selected to fill it.

Positions are not to be considered multidisciplinary or interdisciplinary when members of a work team with varied but complimentary competencies and experiences collaborate on a multifaceted problem or project and contribute to the achievement of organizational specific objectives (e.g., a matrix team). Also excluded are positions which require special licensing, as in the practice of medicine, and

positions which are solely and clearly classifiable to a single series but can be filled by persons from a variety of education and experience backgrounds. Work requiring professional backgrounds including education and experience are considered interdisciplinary. Professional occupations may not be combined with non-professional occupations or viewed as interdisciplinary positions. For further guidance on interdisciplinary positions reference the discussion on Interdisciplinary Professional Positions in Section III, L. in the Introduction to the Position Classification Standards.

Determining Official Position Titles

5 U.S.C. § 5105 (a)(2) requires OPM to establish the official titles of positions in published classification standards. Accordingly, position classification standards generally prescribe the titles to be used for positions in the covered series. Only the prescribed title may be used on official documents relating to a position (e.g., position descriptions and personnel actions).

The requirement to use official titles, however, does not preclude agencies from using any unofficial title they choose for positions. See 5 U.S.C. § 5105(c). Agencies may use organizational or other titles for internal administration, public convenience, or similar purposes.

In those instances where OPM has not prescribed an official title for a series, an agency may designate an official title. According to the Introduction to the Position Classification Standards, constructed titles should be "short," "meaningful," and "generally descriptive of the work performed." All titling should be used consistently throughout the agency.

Titling Guidance for Occupational Series including Artificial Intelligence Duties

Agencies with positions including AI work as outlined in this guidance may supplement the basic or official position titles by adding parenthetical titles, where necessary, to identify AI duties and responsibilities which reflect specific AI knowledge and skills required in the work. Parenthetical titles may be necessary for recruitment purposes and meeting other organizational needs.

Official Specialty or Parenthetical Titles

In addition to this titling guidance, agencies may also use specialty titles. Specialty titles are typically displayed in parentheses and referred to as parenthetical titles as

well. Parenthetical titles, as defined above, may be used with the basic/official title of the position to further identify the duties and responsibilities performed and the special knowledge and skills needed. Examples of parenthetical titles are Data Analyst (AI) and Data Scientist (AI).

Agencies should use the basic or official title without a parenthetical specialty title for positions with no established specialty or emphasis area or for positions involving work in more than two of the established specialties.

You may continue to use other agency-established parenthetical titles where appropriate as unofficial position titles (.g., organizational or functional titles).

Organizational Titles

Organizational and functional titles do not replace, but complement, official position titles. Agencies may establish organizational and functional titles for internal administration, public convenience, or similar purposes. Examples of organizational titles are Artificial Intelligence Branch Chief and Artificial Intelligence Division Chief.

Examples of functional titles are Artificial Intelligence Analyst, Chief Information Artificial Intelligence Officer, and Director of Artificial Intelligence.

Applying Grading Criteria to Positions with Artificial Intelligence Work

According to the Introduction to the Position Classification Standards, selecting the appropriate grade level criteria is critical for determining the proper classification of a position. If the work assigned to a position is adequately covered by the grading criteria in a particular standard for a specific occupational series or job family, then evaluate the work by that occupational series or job family standard (JFS). This includes positions with AI responsibilities.

If the type of work does not have a directly applicable occupational series, job family, or functional standard, then select a standard as similar as possible to the kind of work described. Evaluate and grade the work in question by comparing it to grading criteria in the comparable standard, as it relates to:

- The kind of work processes, functions, or subject matter of the work performed;
- The qualifications required to do the work;
- The level of difficulty and responsibility necessary; and

- The combination of classification factors having the greatest influence on the grade level.

When making these determinations, we recommend referring to one of the following standards for making meaningful comparisons:

- The Position Classification Standard Flysheet for Intelligence Series, GS-0132, to evaluate positions with AI roles.
- The JFS for Professional Work in the Natural Resources Management and Biological Sciences Group, GS0400, to evaluate AI role for natural sciences;
- The JFS for Professional Work in the Medical and Healthcare Group, 0600, to evaluate positions with AI roles in the medical and healthcare industry;
- The Professional Work in the Engineering and Architecture Group, 0800, to evaluate positions with AI roles;
- The JFS for Professional Work in the Physical Science Group, GS-1300, to evaluate positions with AI roles;
- The Position Classification Flysheet for Computer Science Series, GS-1550, to evaluate positions with AI roles;
- The Position Classification Flysheet for Data Science Series, GS-1560, to evaluate such positions with AI roles;
- The JFS for Administrative Work in the Inspection, Investigation, Enforcement, and Compliance Group, GS-1800**,** to evaluate investigation positions with AI role;
- The JFS for Administrative Work in the Information Technology Group, 2200, to evaluate positions in the IT occupation with AI responsibilities; and
- The Administrative Analysis Grade Evaluation Guide to evaluate positions with AI where a more closely related standard has not been issued.

Note: If a position with AI work exercises supervision of Federal Government employees at a level that meets the criteria indicated in General Schedule Supervisory Guide, be sure to evaluate the position's supervisory duties. Do not classify such position to a lower grade on the basis of personal work accomplishment rather than the proper grade for supervising staff of the type and level actually involved.

Impact of Automation and Artificial Intelligence Capabilities

The impact of AI work is a factor to consider in position classification. Automation, computers, information technology (IT), and their widely varied applications are valuable tools for analytical and evaluative work related to program operations, and management and organizational efficiency and productivity. Similar to automation, AI is enhancing the capabilities of Federal employees and aiding the evolution of work. Like automation, AI increases the ability of Federal employees to perform a wide variety of tasks. Employees access files, initiate and track projects, analyze data, and generate reports. They input, store, and retrieve data in multiple formats. They also use the Internet to search for information pertaining to assignments and apply AI tools to augment work and work products. The use of AI allows for the augmentation of work through AI empowered applications using generative AI and machine learning capabilities.

Although the incumbents use computers and applications to perform work processes, knowledge of the rules and processes to perform the work remains the paramount subject-matter knowledge required. The kind of automation tools involved, and the skill required to use them, generally replace, or supplement work methods and techniques previously performed through manual or machine-enhanced processes.

Although computers are used to facilitate work, the use of automation does not change the primary purpose of the work. Proper classification of positions is based on the relevant knowledge and skills required to perform the primary duties of the position.

Applying Grading Criteria to Positions with Artificial Intelligence Functions

Since AI work is found to be multidisciplinary, positions should be graded using the applicable occupational classification standard or guide. AI impact on work is broad, growing, and will continue to evolve. Our study identified 29 occupational series performing AI functions or with AI roles and responsibilities.

Agencies reported AI work being performed in various occupational groups including positions in the following occupational groups and families:

- 0100 – Social Science, Psychology and Welfare Group
- 0200 – Human Resources Management Group
- 0300 – General Administrative, Clerical and Office Services Group
- 0400 – Natural Resources Management and Biological Sciences Group
- 0500 – Accounting and Budget Group
- 0600 – Medical, Hospital, Dental, and Public Health Group

- 0800 – Engineering and Architecture Group
- 1500 – Mathematics and Statistics Group
- 2200 – Information Technology Group

As new roles in AI emerge and the work continue to evolve it will be pivotal to keep pace with the proper analysis of work to determine the needs of your agency and mission critical work aligned with your agency mission. The crossover of mission critical work with AI functions is a HR strategic management goal and will have an impact on core functions (for example, human resources, finance, acquisitions, technology) governmentwide.

The grade level of an AI position will depend on the nature of the work as constrained by the relationship of its scope, resources, and timeline (e.g., its size, risk, sensitivity). Selecting appropriate grade level criteria is a primary decision in determining the proper classification of work. The criteria selected as the basis for comparison should be for a kind of work as similar as possible to that of the position being evaluated.

Factor Level Relationships or the most common factor levels used at various grade levels for different kinds of work (e.g., professional, administrative, technical, and clerical and assistance work) may be helpful when classifying positions and can be found beginning on pg. 14 of The Classifier's Handbook.

The examples on the following pages illustrate how Factor 1 (Knowledge Required by the Position) applies to the duties of a particular Artificial Position in various occupational series and different grade levels. The factor level descriptions (FLDs) are based on the AI work performed at Federal agencies as classified by using the applicable position classification standard, AI competencies, and this guide.

Note: Your agency's evaluation of your AI position or job analysis would inform the knowledge, skills, abilities, and competencies included in your position description. Do not rely solely on these illustrations in evaluating positions.

Illustrations

Example: Data Analyst (Artificial Intelligence), 0343

FLD 1-6: Data Analyst, 0343

Knowledge of:

- management principles, organizational theory, and techniques of analysis and evaluation, along with knowledge of standardized administrative practices and procedures to use established analytical tools and techniques to evaluate data relevant to AI projects.

- research and analytical methods and techniques to extract insights, identify trends, and generate reports.

- established management principles, pertinent administrative regulations, and skill in applying fact-finding and work measurement techniques to assist with planning, coordinating, and executing AI-related projects by setting project timelines, allocating resources, and tracking progress. This role often serves as a bridge between technical teams and management, helping to ensure that AI initiatives align with organizational goals and objectives.

Factor	Level	Points
1. Knowledge Required	1-6	950
2. Supervisory Controls	2-3	275
3. Guidelines	3-3	275
4. Complexity	4-3	150
5. Scope & Effect	5-3	150
6 & 7. Contacts & Purpose	6-2 and 7-b	75
8. Physical Demands	8-1	5
9. Work Environment	9-1	5
Total Points **1,885**		
Conversion **GS-09**		

Example: Information Technology Specialist (APPSW/AI), 2210

FLD 1-7: Information Technology Specialist (APPSW/AI), 2210

Knowledge of and skill in applying:

- applications software development concepts and techniques to provide technical guidance in designing, coding, testing, debugging, and maintaining AI systems and programs.
- Infrastructure requirements to apply computer assisted software engineering (CASE) tools to the design and development process.
- test and evaluation methods for evaluating new applications software technologies and assessing and approving program methods.
- written and oral communication methods and techniques to prepare, organize and deliver information and written materials for readers with little or no technical background.

Factor	Level	Points
1. Knowledge Required	1-7	1250
2. Supervisory Controls	2-4	450
3. Guidelines	3-4	450
4. Complexity	4-4	225
5. Scope & Effect	5-4	225
6 & 7. Contacts & Purpose	6-3 and 7-c	180
8. Physical Demands	8-1	5
9. Work Environment	9-1	5
Total Points **2,790**		
Conversion **GS-12**		

Example: Information Technology Specialist (Data Management/AI), 2210

FLD 1-8: Information Technology Specialist (Data Management/AI), 2210

Mastery and skill in applying:

- database management principles and techniques to automate, develop, implement, and manage database systems.
- data management concepts and techniques to develop data standards, policies, and procedures and to teach lower graded employees proper operation and implementation of databases and systems.
- knowledge of agency strategic AI goals and initiatives to ensure the most efficient database structure and resolve problems for AI systems to function efficiently.
- knowledge of data privacy and security methods and techniques to protect sensitive data and ensure compliance with regulations.
- knowledge of oral and written communication techniques to collaborate with other AI experts such as Data Scientists and Engineers to understand the requirements for training and deploying AI models efficiently.
- coding techniques and methods to ensure data is accurate, complete, and properly formatted for use in AI algorithms.

Factor	Level	Points
1. Knowledge Required	1-8	1550
2. Supervisory Controls	2-4	450
3. Guidelines	3-4	450
4. Complexity	4-5	325
5. Scope & Effect	5-5	325
6 & 7. Contacts & Purpose	6-3 and 7-3	180
8. Physical Demands	8-1	5

Factor	Level	Points
9. Work Environment	9-1	5
Total Points **3,290**		
Conversion **GS-13**		

Example: Data Scientist, 1560

FLD 1-8: Data Scientist, 1560

Mastery and skill in applying:

- advanced Data Science principles, concepts, methods, standards, and practices sufficient to develop and interpret policies, procedures, and strategies and to provide expert advice, guidance, and recommendations to management on critical Data Science issues.
- Computer Science, Mathematical and Statistical Theory concepts for in-depth analysis to improve workflows, decision making, data visualization, and improve efficiency of program operations.
- a combination of computational methods, machine learning algorithms, and data mining to sufficiently develop, design, improve, manage, and troubleshoot enterprise-wide data science and analytics products.
- AI and Machine Learning and algorithms to improve existing data science products as well as create and deploy new ones for the management and direction of programs.
- knowledge in the development, operation, and testing of multiple software tools used for data engineering, data visualization, and data science sufficient to oversee the installation, customization, testing, and implementation of software tools, and to work with vendors technical team to correct problems and enhance performance.
- skill in conducting optimization, spatial and time-series modeling, machine learning, data engineering, mathematical programming, Natural Language

Processing, coding, and data visualization to propose data- driven decisions and recommendations to organizational leadership.

- skill to communicate both orally and in writing sufficient to convey complex technical requirements to non-technical personnel and to prepare and present briefings to management on complex data science issues to include advising leadership on the potential benefit and use of automation to improve the efficiency of program operations.

Factor	Level	Points
1. Knowledge Required	1-8	1550
2. Supervisory Controls	2-5	650
3. Guidelines	3-5	650
4. Complexity	4-5	325
5. Scope & Effect	5-5	325
6 & 7. Contacts & Purpose	6-3 and 7-3	180
8. Physical Demands	8-1	5
9. Work Environment	9-1	5
Total Points **3,690**		
Conversion **GS-14**		

The Classifier's Handbook includes additional guidance on Factor Level Relationships or the most common factor levels used at various grade levels for different kinds of work (e.g., professional, administrative, technical, and clerical and assistance work).

Identifying Positions above the GS-15 Grade Level

Agencies are responsible for managing their executive resources and deciding how to organize functions and structure positions, including positions with AI work, in a manner that best meets the organization's mission requirements. This includes deciding whether positions meet the Senior Executive Service (SES) criteria or the Senior Level (SL) or Scientific Professional (ST) criteria and establishing individual SES, SL, and ST positions within the agency's executive resource allocation as authorized by OPM.

The law and OPM regulations clearly state that SES, SL, and ST positions must be classifiable **above the GS-15 grade level**. Positions at the GS-15 grade level as described in statute clearly cover a broad range of work: **Grade GS-15 includes those classes of positions the duties of which are to perform, under general administrative direction, with very wide latitude for the exercise of independent judgment, work of outstanding difficulty and responsibility along special technical, supervisory, or administrative lines which has demonstrated leadership and exceptional attainments.** See 5 U.S.C. § 5104(15). Do not assume a position is above the GS-15 grade level simply because it has a somewhat larger scope or requires more knowledge and skill than another position with AI work that is already -classified at GS15.

Distinctions among the SES, SL, and ST positions are not always clear. The following information provides general guidance to help agencies identify SES, SL, and ST positions; maintain an agency's flexibility to manage its executive resources; and contribute to intra- and inter-agency consistency in establishing SES, SL, and ST positions.

General Information - Unless an agency is excluded from the SES by statute or by the President of the United States, any position that is classifiable above the GS-15 grade level **and** which meets the functional executive criteria set forth in 5 U.S.C. § 3132(a)(2) may be placed in the SES. Positions that are classifiable above the GS-15 grade level that do **not** meet the executive criteria and involve the performance of high-level research and development in the physical, biological, medical, or engineering sciences are more appropriately placed in the ST system. The SL system includes any other positions that are classifiable above the GS-15 grade level and do **not** meet the executive criteria and do **not** involve the fundamental research and development responsibilities characteristic of ST positions.

SES Criteria - 5 U.S.C. § 3132(a)(2) sets forth the criteria that characterize SES positions. SES positions must be classifiable **above the GS-15 grade level**, or equivalent, based on

the duties, responsibilities, and qualifications required by the position. In addition, the incumbent **must** engage in one of the following activities:

- Directing the work of an organizational unit;
- Being accountable for the success of one or more specific programs or projects;
- Monitoring progress toward organizational goals and periodically evaluate and make appropriate adjustments to such goals;
- Supervising the work of employees (other than personal assistants); or
- Otherwise exercising important policy-making, policy-determining, or other executive functions.

Directing the work of an organizational unit to manage a program includes responsibility for:

- Assessing policy, program, and project feasibility;
- Determining program goals and developing implementation tools;
- Designing an organizational structure to promote effective work accomplishment; and
- Setting effectiveness, efficiency, productivity, and management or internal control standards.

Being accountable for the success of a program that encompasses responsibility for the full range of factors that affect program management along with an AI role and accomplishment. This includes:

- Obtaining the resources necessary to achieve the desired program objective;
- Assuming responsibility for the effective use of government resources; and
- Dealing with key officials both within and outside the organization to gain understanding and support for all aspects of the program and program functions.

Monitoring progress toward organizational goals and making appropriate adjustments is an extension of an individual's responsibility for directing the work of an organizational unit. It includes:

- Monitoring work status through formal and informal means to evaluate progress toward objectives;
- Assessing overall effectiveness, efficiency, and productivity of the organization;
- Identifying, diagnosing, and consulting on problem areas related to implementation and goal achievement; and
- Making decisions regarding alternative courses of action.

Supervising the work of employees should be credited only if the position meets the minimum requirements for coverage under OPM's General Schedule Supervisory Guide. Specifically, the position's supervisory responsibilities must:

- Require accomplishment of work through the combined technical and administrative direction of others;
- Constitute a major duty occupying at least 25 percent of the incumbent's time; and
- Meet at least the lowest level of Factor 3 in the guide based on supervision of non-contractor personnel. (Work performed by contractors is considered in applying the grading criteria within each factor of the supervisory guide, provided the position first meets the coverage requirements above based on supervision of non-contractor personnel).

Policymaking or policy-determining functions include responsibility for reviewing staff recommendations on policies developed to affect the organization's mission; considering political, social, economic, technical, and administrative factors with potential impact on recommended policies; and approving those policies.

It would be unusual to find a position that entails making major policy decisions.

Distinguishing Between SES and SL or ST Positions – Positions that are properly classified above the grade GS-15 grade level, and do **not** meet the functional executive criteria, are more appropriately placed in the Senior Level (SL) or Scientific or Professional (ST) systems. The nature of a position's work determines which system is most appropriate.

Senior Level (SL) Positions. SL positions are classifiable **above the GS-15 grade level**, but do **not** meet the executive criteria characteristic of the SES, nor do they involve the fundamental research and development responsibilities characteristic of ST positions. SL positions may include some supervisory and related managerial duties, provided these duties occupy less than 25 percent of the position's time.

Note: In some instances, the SL system is used for positions that meet the SES executive criteria in agencies that have been excluded from the SES.

- **Scientific and Professional (ST) Positions.** ST positions are classifiable **above the GS-15 grade level** and involve the performance of high-level research and development in the physical, biological, medical, or engineering sciences (or closely related field). ST positions may include some supervisory and related managerial duties, provided these duties occupy less than 25 percent of the position's time.

Qualifying and Ranking Applicants

Qualifying Applicants

Governmentwide minimum qualification standards are published in OPM's General Schedule Qualification Policies (opm.gov). Most qualification standards permit applicants to qualify based on education or training, experience, or a combination of the two. They include the patterns of education, training, or experience most commonly applicable to a particular occupational series. Some qualification standards, however, have specific educational, licensure, or certification requirements that may apply only to specific positions in an occupational series. Agencies and examining offices should select the qualification standard that covers the occupational series to which a position has been classified.

Because AI work usually requires unique competencies based on agencies' mission, agencies must determine the paramount knowledge required for occupations that includes AI. After identifying the appropriate occupation, selection of the proper qualification standard can be made. The occupational knowledge determines the series of a position for classification purposes (see Determining Occupational Series of Positions with Artificial Intelligence Work, pg. 22). It also determines the qualifications standard used to screen qualifications of applicants. However, for occupations with AI work, agencies must include specific AI competencies to select an individual to fill any position with AI work (see Appendix B – Artificial Intelligence Competencies). For minimum qualifications, use the qualification standard appropriate for the occupational series, in addition to competency-based policy guidance (see

Competency-Based Requirements in the General Schedule Qualification Policies - opm.gov). Additional guidance will be forthcoming on skills-based approaches for qualifying talent using AI Competencies.

Agencies may supplement minimum qualifications with additional KSAs or competencies identified through a job analysis. A job analysis is a systematic method of studying a job to identify the tasks performed and link them to the KSAs or competencies required to perform these tasks. Where appropriate, and supported by a job analysis, agencies may use the competency as a selective factor or quality ranking factor. For additional information on conducting a job analysis and establishing selective and quality ranking factors, agencies may consult OPM's Delegated Examining Operations Handbook.

Competency-Based Requirements

Competency-Based Qualifications includes a set of required competencies and related proficiency levels by grade. A competency-based qualification provides a flexible way for agencies to determine if applicants are qualified for a position because of the many options for assessing applicants (e.g., ability tests, work samples, structured interviews). In addition, the same assessments may be used for rating purposes, enabling a more seamless assessment process for both the applicant and agency. (See the General Schedule Qualifications Operations Manual for further guidance.)

When assessing job applicants based on competencies and proficiency levels, rather than just minimum qualifications, agencies are required to use validated (e.g., job-related) assessment tools. Use of validated assessment tools, such as cognitive tests and structured interviews, is critical when assessing job applicants to validate competency-based qualifications. The Delegated Examining Operations Handbook provides guidance on how agencies should conduct assessments and evaluations, ensuring fairness and transparency for all applicants.

A job analysis assists agencies in identifying necessary competencies for specific positions. OPM's Multipurpose Occupational Systems Analysis Inventory—Closed-ended (MOSAIC) methodology aids in this process, providing a basis for building consistent human resource management systems across Federal occupations. Competency-based qualifications are used for both initial screening and subsequent assessments. Applicants must meet required proficiency levels in all competencies, and failure to do so results in disqualification from further consideration for the position. These competency-based approaches are mandatory when determining

qualification requirements in the hiring process. Agencies may use the OPM AI competency model to build agency specific competency base.

Additional information about competency-based qualification requirements can be found in the General Schedule Qualifications Operating Manual.

OPM's MOSAIC Competencies publication has been updated and renamed to the Office of Personnel Management's Federal Workforce Competency Initiative (FWCI) and MOSAIC Competency Library (September 2023) (Attachment 2). The library includes the FWCI competencies and definitions and the MOSAIC competencies and definitions including updated general competency models for 80 occupational series. This work was a governmentwide effort led by OPM. The work updates a subset of the general competencies used in OPMs MOSAIC studies. The source of more detailed information about this study can be found at Federal Workforce Competency Initiative - General Competencies and Competency Models | CHCOC. The competencies required as determined by a job analysis for a position may be used for screening applicants. The FWCI general competencies and other OPM competency models may be used in addition to the AI competencies OPM identified for talent management activities as supported by a job analysis.

Selective factors become part of the minimum requirements for a position. A selective factor is a "screen out" (e.g., if an applicant does not meet a selective factor, they are ineligible for further consideration).

Selective factors:

- Are essential for successful performance on the job (e.g., if individuals do not have the selective factor, they cannot perform the job);
- Are almost always geared toward a specific technical KSA or competency;
- Require extensive training or experience to develop; and
- Cannot be learned on the job in a reasonable amount of time.

Selective factors cannot be so narrow that they preclude from consideration applicants who could perform the duties of the position. Agencies may not use selective factors that could be learned readily during the normal period of orientation to the position. Nor should agencies use selective factors that are so agency specific that they exclude from consideration applicants without prior Federal service or preclude selection of applicants from priority placement lists established to assist in the placement of

employees affected by reductions in force. Examples of KSAs or competencies that **should not** be used as selective factors include knowledge of:

- An organization's policies and planning processes; and
- An agency's rules, regulations, policies, and guidance.

Note: When using a selective factor, you must specify the required proficiency level.

Ranking Qualified Applicants

Quality ranking factors are KSAs or competencies that significantly enhance performance in a position, but, unlike selective factors, are not essential for satisfactory performance. Agencies should rank applicants with higher proficiency levels on a quality ranking factor above those with lower proficiency levels. Agencies may not rate qualified candidates ineligible solely for failure to possess a quality ranking factor. With quality ranking factors, the focus is on the level of proficiency the candidate brings to the job.

Justification and Documentation

Agencies must document both selective factors and quality ranking factors through job analysis by identifying the:

- KSAs or competencies basic to and essential for satisfactory job performance;
- Duties and tasks the incumbent will perform that require possessing the required KSAs or competencies; and
- Education, experience, or other qualifications that provide evidence of the possession of the required KSAs or competencies.

(See the General Schedule Qualifications Operations Manual for further guidance.)

Certification

OPM has not established certification requirements for the AI workforce. However, agencies may specify a particular type of certification (or equivalency) in establishing

selective criteria or in defining quality ranking factors. Subject matter experts must determine that the certification is necessary for satisfactory job performance (e.g., the certification is related to the duties and tasks and required KSAs or competencies of the job). The certification may then be used as evidence validated by a job analysis that a person has the KSAs or competencies needed to perform AI work at a satisfactory level. (See the General Schedule Qualifications Operations Manual for further guidance.)

Assessment Policy, Resources, and Tools

Applicable law requires the use of effective assessments in the hiring process, and OPM promotes their use for practical reasons as well. The use of effective assessments addresses barriers to recruiting and hiring the talent needed in agencies to perform the AI work of the agency and improves the quality and diversity of hires. In addition, the use of effective assessments in the hiring process provides human resources professionals and hiring managers the tools and resources needed to support their recruiting and hiring efforts and increase hiring manager satisfaction with the quality of applicants. This requires the collaboration between HR and hiring managers to develop and design effective assessment strategies to hire the talent needed to perform the AI work of your agency.

Agencies should standardize and document the assessment process through the following steps:

- Treat all individuals consistently. This is most easily accomplished by adopting a standardized assessment and decision-making process. "Standardizing" means making a process uniform to ensure the same information is collected on each individual and is used in a consistent manner in employment decisions.
- Ensure the selection tool is based on an up-to-date job analysis and is supported by strong validity evidence. A validation study can verify that applicants who score well on the selection device are more likely to do well on the job and contribute to organizational success. Agencies not familiar with validation research methodology are encouraged to consult a measurement expert.

  On June 26, 2020, Executive Order 13932 on Modernizing and Reforming the Assessment and Hiring of Federal Job Candidates was issued, directing merit-based reforms to expand the use of valid, competency-based assessments and narrow the use of educational qualifications in the Federal hiring process. The intent is to direct agencies to use a skills and competency-based approach in conducting hiring across the Federal Government via assessments that carefully

measure candidates' ability to perform the job. Agencies must determine whether an applicant has the level of proficiency needed to perform the work of the position being filled. This may be done through the use of a passing grade assessment. The provisions governing hiring allow for the use of hiring flexibilities such as, direct hire, when applicable. Agencies must determine best approach for acquiring talent to meet your need and mission. The provisions used for acquiring talent will determine the application of assessments in the hiring process. (See Guidance Release - E.O. 13932; Modernizing and Reforming the Assessment and Hiring of Federal Job Candidates for additional guidance.)

OPM offers various assessments resources and tools for agency use. The following highlights our policy, tools, and educational resources available to agencies.

Policy

Assessment & Selection Website – contains resources to learn more about personnel assessment, assessment methods, steps to designing effective assessment strategies, and the importance of effective personnel assessment.

Delegated Examining Operations Handbook (DEOH), contains information on the assessment process and policy.

- **Chapter 2**– Identifying the Job and its Assessments (p. 2-1);
    - Multipurpose Occupational Systems Analysis (p. 2-13 to 2-14)
- **Chapter 5** – Assess Applicants (p.5-1);
- **Appendix D** – OPM's Job Analysis Methodology (p. D-1).

Interagency Assessment Policy Forum – Interagency work group with the focus to improve assessments Governmentwide. Contact us at assessment_information@opm.gov.

Tools

Assessment Decision Guide (ADG) - We developed this guide as a resource for agencies designing assessment strategies to fill critical vacancies at all levels. The guide includes information on personnel assessment, assessment methods, and assessment strategy

design. The information provided in this guide is one source agencies may consult in developing effective assessment strategies. Agencies are also encouraged to consult the other resources described in the guide below for additional information and guidance on the use of assessments.

Assessment Decision Tool (ADT) – OPM's automated system developed to help Federal agencies evaluate and improve their hiring processes and thus continuously build and sustain an effective civilian workforce for the Federal Government. The system is designed to help human resources professionals and hiring supervisors and managers develop assessment strategies targeted to specific competencies and other situational factors relevant to their hiring situation (e.g., volume of applicants, level of available resources). The ADT is designed to provide you with customized information based on your specific hiring needs.

USA Hire – The USA Hire℠ assessment battery can be used in conjunction with the traditional occupational questionnaire, or additional assessments, such as a Structured Interview, to target agency-specific job requirements. USA Hire℠ offers the following advantages:

- Objective, professionally developed assessments
- An efficient and effective tool for evaluating candidates
- Meets all legal guidelines and professional standards
- Applicant friendly
- Ease of implementation as it is already fully integrated with USA Staffing®
- Advanced technology to include computer adaptive testing
- Whole person assessments allow agencies to target critical job-relevant competencies
- More valid measures of applicant competence, reinforced by decades of research supporting the validity of USA Hire℠ type assessment results

Educational Resources

OPM's Assessment and Selection website includes information on personnel assessment, assessment methods, steps to designing effective assessment strategies,

and the importance of effective personnel assessment. OPM provides presentations and tools that agencies may use to develop an assessment strategy and to learn more about various assessment tools and the use of assessments to meet agency specific needs in hiring (e.g., Designing an Assessment Strategy).

The Hiring Assessment and Selection Outcome Dashboard | D2D (gsa.gov) provides information on agency hiring and the use of assessments for meeting requirements to hire talent using assessments.

In addition to these resources, OPM launched two free online courses as part of the "Designing an Assessment Strategy and Use of SME-Based Assessments" training courses. These courses are created to educate the Federal HR community on the fundamentals of designing an assessment strategy and using subject matter experts (SMEs) to develop competency-based assessments using cut scores for their competitive examining positions. The first course, Course 1: Designing an Assessment Strategy: Fundamental Concepts, Processes and Applications is structured to provide employees with the foundational knowledge of core concepts, processes, and practices about Federal hiring policies and its' authorities, the importance of a job analysis, and considerations for designing an assessment strategy. The second course, Course 2: Use of Hiring Assessments: A SME-Based Approach, is an interactive audio-based course that provides in-depth information on the steps to develop and score various competency-based assessments in collaboration with hiring managers and subject matter experts.

The "Designing an Assessment Strategy and Use of SME-Based Assessments" courses are available on the OPM WPI Virtual Training Center. For detailed instructions on course registration and Frequently Asked Questions, refer to page 3 of the Memorandum to HR Directors (December 2023).

Further Guidance

If you have questions about this guide, contact the appropriate OPM office as follows:

- Classification and Qualifications Policy – FedClass@opm.gov
- Assessment Policy – Assessment_Information@opm.gov
- Hiring Policy (Employment or staffing policy questions) – Employ@opm.gov
- Hiring Experience Group – HX@opm.gov
- Pay and Leave Policy – pay-leave-policy@opm.gov

- Training and employee development topics – HRDLeadership@opm.gov
- Human Resources Solutions - HRStrategy@opm.gov

Appendix A –Artificial Intelligence Work Profile

Artificial Intelligence

Technical Competencies	**Corresponding Tasks**
Application Development	Conducts reviews or walk throughs of systems or applications (for example, reviews commercial off-the-shelf source code).
Artificial Intelligence and Machine Learning	Analyzes new technology capabilities and opportunities to develop innovative AI techniques and equipment.
Communicating Results	Creates or maintains documentation for computer systems, applications, programs, or databases.
Data Analysis	Analyzes new technology capabilities and opportunities to develop innovative AI techniques and equipment.
Data Extraction and Transformation	Develops specifications (for example, security specifications) for the design or modification of computer systems or applications.
Data Visualization	Programs tables, charts, graphs, or diagrams to organize or show information.
Mathematics and Statistics	Enters data or other information into software programs or applications.

Technical Competencies	Corresponding Tasks
Modeling and Simulation	Develops simulation systems or prototypes (for example, molecular dynamics, Monte Carlo simulations).
Monitoring	Maintains computerized databases or information tracking systems.
Sociotechnical System	Develops, amends, revises, or provides input on laws, regulations, policies, standards, or procedures.
Software Engineering	Designs and integrates human factors or graphical user interfaces.
Systems Design	Designs information systems infrastructures (for example, networks or telecommunication systems).
Testing and Validation	Tracks, interprets, or reports information systems test results.
Value Driven Design	Adapts to changes in work environment, technology and tools, organizational structure, or leadership.

Appendix B – Artificial Intelligence Competencies

General Competencies

- Accountability
- Attention to Detail
- Computer Skills
- Conflict Management
- Contracting and Procurement
- Creativity and Innovation
- Customer Service
- Decisiveness
- Design
- Digital Collaboration
- Emotional Intelligence
- External Awareness
- Flexibility
- Influencing or Negotiating
- Information Management
- Integrity or Honesty
- Interpersonal Skills
- Learning
- Organizational Awareness
- Partnering
- Perceptual Speed
- Planning and Evaluating
- Political Savvy
- Problem Solving
- Project Management
- Reading
- Reading Comprehension
- Reasoning
- Resilience
- Self-Management
- Strategic Thinking
- Stress Tolerance
- Supporting Diversity
- Teaching Others
- Teamwork
- Technical Competence

- Mathematical Reasoning
- Memory
- Mental Visualization
- Oral Communication
- Technology Application
- Technology Awareness
- Written Communication

Artificial Intelligence General Competency Definitions

Competency	Definition
Accountability	Holds self and others accountable for measurable high-quality, timely, equitable and cost-effective results. Determines objectives, sets priorities, and does and delegates' work. Accepts responsibility for mistakes. Complies with established control systems and rules.
Attention to Detail	Is thorough when performing work and conscientious about attending to detail and potential biases.
Computer Skills	Uses computers, software applications, databases, and automated systems to accomplish work.
Conflict Management	Encourages creative tension and differences of opinions. Anticipates and takes steps to prevent counter-productive confrontations. Manages and resolves conflicts and disagreements in a constructive manner. Escalates conflicts and disagreements when appropriate and constructive in order to get to resolution.
Contracting and Procurement	Knowledge of various types of contracts, techniques, or requirements (for example, Federal Acquisitions Regulations) for contracting or procurement, and contract negotiation and administration.

Competency	Definition
Creativity and Innovation	Develops new insights into situations; questions conventional approaches; encourages new ideas and innovations; designs and implements new or cutting-edge programs and processes.
Customer Service	Anticipates and meets the needs of both internal and external customers. Seeks to obtain customer feedback through various channels to improve products and services. Delivers high-quality products and services; is committed to continuous improvement.
Decisiveness	Makes well-informed, effective, and timely decisions, balancing speed and thoughtfulness; perceives the impact and implications of decisions and takes decisive and early steps to mitigate negative impacts.
Design	Knowledge of conceptualizing, developing, producing, understanding, and using plans, models, blueprints, and maps, including the use of tools and instruments to produce precision technical drawings, working prototypes, components, or systems.
Digital Collaboration	Uses digital tools, technologies, or social media for communication, knowledge-sharing, and collaborative processes; works with others to construct and create resources and knowledge, or provide services, in a digital environment.
Emotional Intelligence	Ability to understand and manage feelings so that they are expressed appropriately and can monitor one's own and others' feelings and emotions, discriminate among the emotions and to use this information to manage situations, thinking and actions.
External Awareness	Understands and keeps up to date on local, national, and international policies and trends that affect the organization and shape stakeholders' views; is aware of the organization's impact on the external environment.

Competency	Definition
Flexibility	Is open to change and new information; rapidly adapts to new information, changing conditions, or unexpected obstacles.
Influencing and Negotiating	Persuades others; builds consensus through give and take; gains cooperation from others to obtain information and accomplish goals.
Information Management	Identifies a need for and knows where or how to gather information; organizes and maintains information or information management systems.
Integrity or Honesty	Behaves in an honest, fair, and ethical manner. Shows consistency in words and actions. Models' high standards of ethics.
Interpersonal Skills	Treats others with courtesy, sensitivity, and respect. Considers and responds appropriately to the needs and feelings of different people in different situations.
Learning	Uses efficient learning techniques to acquire and apply new knowledge and skills; uses training, feedback, or other opportunities for self-learning and development.
Mathematical Reasoning	Solves practical problems by choosing appropriately from a variety of mathematical and statistical techniques.
Memory	Recalls information that has been presented previously.
Mental Visualization	Sees things in the mind by mentally organizing and processing symbols, pictures, graphs, objects, or other information (for example, sees a building from a blueprint, or sees the flow of work activities from reading a work plan).
Oral Communication	Makes clear and convincing oral presentations. Listens effectively; clarifies information as needed. Effectively

Competency	Definition
	communicates technical information to non-technical audiences and stakeholders.
Organizational Awareness	Knows the organization's mission and functions, and how its social, political, and technological systems work and operates effectively within them; this includes the programs, policies, procedures, rules, and regulations of the organization.
Partnering	Develops networks and builds alliances; collaborates across boundaries to build strategic relationships and achieve common goals.
Perceptual Speed	Quickly and accurately sees detail in words, numbers, pictures, and graphs.
Planning and Evaluating	Organizes work, sets priorities, and determines resource requirements; determines short- or long-term goals and strategies to achieve them; coordinates with other organizations or parts of the organization to accomplish goals; monitors progress and evaluates outcomes. Sets reasonable expectations with leadership and stakeholders on project delivery.
Political Savvy	Identifies the internal and external politics that impact the work of the organization. Perceives organizational and political reality and acts accordingly.
Problem Solving	Identifies and analyzes problems; weighs relevance and accuracy of information; generates and evaluates alternative solutions; makes recommendations.
Project Management	Knowledge of the principles, methods, or tools for developing, scheduling, coordinating, and managing projects and resources, including monitoring, and inspecting costs, work, and contractor performance.

Competency	Definition
Reading	Understands and interprets written material, including technical material, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations.
Reading Comprehension	Understands and interprets written material, including technical material, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations.
Reasoning	Identifies rules, principles, or relationships that explain facts, data, or other information; analyzes information and makes correct inferences or draws accurate conclusions.
Resilience	Deals effectively with pressure; remains optimistic and persistent, even under adversity. Recovers quickly from setbacks.
Self-Management	Sets well-defined and realistic personal goals; displays a high level of initiative, effort, and commitment towards completing assignments in a timely manner; works with minimal supervision; is motivated to achieve; demonstrates responsible behavior.
Strategic Thinking	Formulates objectives and priorities and implements plans consistent with the long-term interests of the organization in a global environment. Capitalizes on opportunities and mitigates risks.
Stress Tolerance	Deals calmly and effectively with high stress situations (for example, tight deadlines, hostile individuals, emergency situations, dangerous situations).

Competency	Definition
Supporting Diversity	Maintains an open mind regarding different ideas, opinions, values, and beliefs; recognizes own worldview and understands its influence on interactions with others; incorporates a variety of viewpoints to help accomplish work goals; contributes to an inclusive work environment with equitable treatment of individuals across all demographics (e.g., race, gender) and social (e.g., culture) groups.
Teaching Others	Helps others learn through formal or informal methods; identifies training needs; provides constructive feedback; coaches others on how to perform tasks; acts as a mentor.
Teamwork	Encourages and facilitates cooperation, pride, trust, and group identity; fosters commitment and team spirit; works with others to achieve goals.
Technical Competence	Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one's job; works with, understands, and evaluates technical information related to the job; advises others on technical issues.
Technology Application	Uses machines, tools, instruments, or equipment effectively; uses computers and computer applications to analyze and communicate information in the appropriate format.
Technology Awareness	Knowledge of developments and new applications of information technology (hardware, software, telecommunications), emerging technologies and their applications to business processes, how emerging technologies can impact people's rights and safety, and applications and implementation of information systems to meet organizational requirements.

Competency	Definition
Written Communication	Writes in a clear, concise, organized, and convincing manner for the intended audience. Effectively communicates technical information to non-technical audiences and stakeholders.

Artificial Intelligence Technical Competencies

- Application Development
- Artificial Intelligence and Machine Learning
- Communicating Results
- Data Analysis
- Data Extraction and Transformation
- Data Visualization
- Mathematics and Statistics
- Modeling and Simulation
- Monitoring
- Sociotechnical Systems
- Software Engineering
- Systems Design
- Testing and validation
- Values-driven Design

Technical Competency Definitions

Competency	Definition
Application Development	Uses programming languages to script and automate tasks; applies programming languages and skills across multiple platforms or frameworks.
Artificial Intelligence and Machine Learning	Knowledge of the principles, methods, and tools used to design systems that perform and apply human-like intelligence functions such as neural networks, deep learning, natural language processing, robotics, and image recognition.
Communicating Results	Translates technical concepts, data findings, uncertainty, and limitations (including potential bias) from data sets into concise, plain language and supporting diagrams and media.

Competency	Definition
Data Analysis	Manipulates and exploits internal and external, structured, and unstructured data sources to accomplish organizational goals.
Data Extraction and Transformation	Retrieves and ingests disparate types of data from a variety of unstructured and structured sources, and then organizes, cleans, and transforms data sets for easy access, analysis, and optimization.
Data Visualization	Utilizes tools, techniques, and software to generate reports or visualizations that convey data analyses, findings, and limitations.
Mathematics & Statistics	Utilizes an understanding of mathematical and statistical techniques and software tools to apply appropriate statistical or mathematical methodology to datasets in order derive meaning, determine significance, or to produce metrics.
Modeling and Simulation	Applies tools, techniques, and procedures to develop functional, physical, or prototype models and simulations for training, testing and evaluation, to predict behavior and phenomena, to evaluate design alternatives, to support operational preparation, and to visually communicate concepts or validate requirements.
Monitoring	Designs, executes, and analyzes studies to assess the potential and actual effects of AI systems on different stakeholders over time, using quantitative and qualitative methods including user studies, rapid equity assessments, impact assessments, usability studies, algorithmic audits, and sociotechnical analysis.
Sociotechnical Systems	Knowledge of the social structures, roles, and interactions to inform the design of systems that involve people and technology. Examples of STSs include emails, blogs, and social media sites such as Facebook and Twitter.

Competency	Definition
Software Engineering	Designs software utilizing the software life cycle process; develops, deploys, updates, maintains, and tests software using methodologies and tools; designs to leverage software reusability; and establishes and utilizes software engineering theory and techniques.
Systems Design	Designs and evaluates software and hardware and develops enterprise and solution architectures that meet user needs and requirements (e.g., security and privacy) and optimize performance, using applicable principles, methods, and tools.
Testing and Validation	Works closely with AI system design, engineering, implementation, and system stakeholders to develop appropriate methods for testing and validation to ensure that systems comport with goals and values, and potential sources of bias are uncovered, considered, and mitigated.
Values-driven design	Systematically applies principles and techniques from relevant subject matter domains to all aspects of design, development, maintenance, and deployment to protect the rights and safety of stakeholders and the public, ensuring equity, security, privacy, autonomy, accessibility, justice, beneficence, and nonmaleficence. Creatively combines technical and policy approaches to protect and support these core values. Ensures that values inform the design, deployment, testing, and oversight of AI systems, and that important value-related design choices are communicated to end users.

Note: Additional technical competencies should be identified based on the specific occupation

Appendix C – Artificial Intelligence in the Federal Government

The nature and scope of AI work is constantly evolving. Efforts will be ongoing to identify the AI workforce within the Federal Government for current and future needs. Below is a sample of important directives and guidance addressing the Federal AI workforce, which also informed OPM's efforts to identify Federal AI work.

Directive or Model	Description	Release Date
Summary of the 2018 Department of Defense Artificial Intelligence Strategy	The 2018 Department of Defense (DoD) Artificial Intelligence Strategy articulates DoD's approach and methodology for accelerating the adoption of AI-enabled capabilities to strengthen our military, increase the effectiveness and efficiency of the agency's operations, and enhance the security of the Nation.	2018
Executive Order (E.O.) 13859 - Maintaining American Leadership in Artificial Intelligence	Establishes Federal principles and strategies to strengthen the nation's capabilities in AI to promote scientific discovery, economic competitiveness, and national security. American AI Initiative is defined and divided into five principles	February 11, 2019
The National Artificial Intelligence Research and Development Strategic Plan: 2019 Update	Establishes a set of objectives for Federally funded AI research, identifying eight strategic priorities. The plan allows for expanded public-private partnerships to accelerate advances in AI.	June 2019
Text - H.R.133 - 116th Congress (2019-2020): Consolidated	Section 103 - created within the General Services Administration the "AI Center of Excellence" to facilitate	December 27, 2020

Directive or Model	Description	Release Date
Appropriations Act, 2021 | Congress.gov | Library of Congress – The Artificial Intelligence Act of 2020, Public Law, 116-260	the adoption of AI in the Federal Government. Section 104 - Guidance is to inform the development of policies regarding Federal acquisition and use by agencies regarding technologies that are empowered or enabled by AI, including an identification of the responsibilities of agency officials managing the use of such technology. Section 105 - Update of occupational series for AI identify key skills and competencies needed for positions related to AI to determine if a new series is needed or improve an existing series.	
National Artificial Intelligence Initiative of 2020 (NAIIA)	Part of National Defense Authorization Act (NDAA) for fiscal year 2021. Section 1751 - Guidance and direction on the hiring process and use of available direct hire authorities for AI professionals. Ensures U.S. leads in AI development, research, and implementation is trustworthy to users. The United States must take a whole of government approach to leadership in trustworthy AI.	January 1, 2021
GAO, Artificial Intelligence: An Accountability Framework for Federal Agencies and Other Entities	Identifies key practices to help ensure accountability and responsible AI use by Federal agencies and other entities involved in the design, development, deployment, and continuous monitoring of AI systems.	June 2021

Directive or Model	Description	Release Date
Executive Order 14091	The Executive Order establishes new standards for AI safety and security, protects Americans' privacy, advances equity and civil rights, stands up for consumers and workers, promotes innovation and competition, advances American leadership around the world, and more.	February 16, 2023
Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence	The EO includes policy to advance and govern the development and use of AI in accordance with eight guiding principles and priorities - • Safe and Secure AI. • Promote responsible innovation, competition, and collaboration. • Consistent policies advancing equity and civil rights. • Manage risks and increase capacity to regulate, govern, and support responsible use of AI.	October 30, 2023
Artificial Intelligence: GAO-24-105980, GAO job code 105980	U.S. Government Accountability Office (GAO) reviewed the implementation of AI required legislative priorities at Federal agencies with governmentwide roles in AI implementation. Their report examines (1) Federal agency reported current and planned uses of AI, (2) the extent to which Federal agencies' AI reporting was comprehensive and accurate, and (3)	November 3, 2023

Directive or Model	Description	Release Date
	the extent to which Federal agencies have complied with selected Federal policy and guidance on AI. GAO identified requirements from executive orders, OMB guidance, law regarding the implementation of AI, and assessed agencies' implementation of these requirements.	
OMB M-24-10: Advancing Governance, Innovation, and Risk Management	The memorandum describes the roles, responsibilities, seniority, position, and reporting structures for agency CAIOs, including expanded reporting through agency AI use case inventories.	March 28, 2024

Note: Select the directive or model to view the content of the source.

U.S. Office of Personnel Management

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