

Machine Learning Path: Data Scientist Skills Tracker

Track your skills growth along a learning
path curated just for data scientists



Map your data science journey

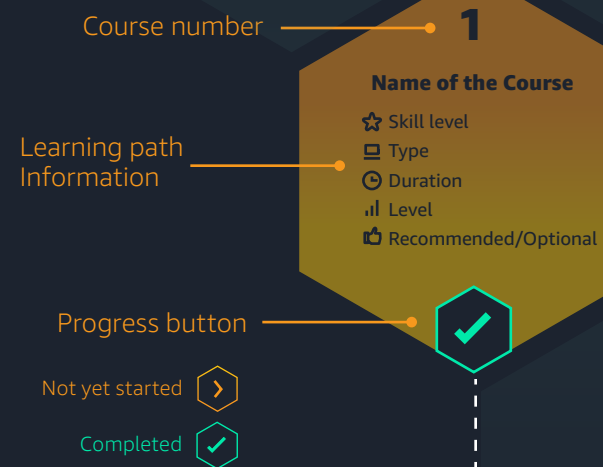
The AWS Training and Certification Machine Learning Path: Data Scientist is a curated curriculum of self-paced digital, virtual classroom, and in-person classroom courses designed for data scientists—and all those skilled in mathematics, statistics, and analysis—who want to become machine learning subject-matter experts. Most courses are free and available on demand—so you can study machine learning theory and real-world applications however, whenever, and wherever you want.

This skills tracker helps you chart your progress as you move forward on the learning path. With each course, you'll be building machine learning skills grounded in advanced math, analytics, and statistics. Remember, this is training built on the curriculum Amazon trusts to help its own machine learning experts. As you develop your abilities, you can apply your knowledge to your own real-world projects, achieve an industry-recognized certification to advance your career, and continue to grow your skillset.

How to use this skills tracker

Look for symbols and icons on the learning path for information about course lengths, venues (digital, virtual instructor-led, or classroom), and which specific skills you'll walk away with. Mark your progress on the map by clicking the status buttons to indicate when courses are completed or not yet started. Click course titles to learn more about each training course and where it lies on the larger path.

Your machine learning journey begins now.



Use the skills tracker to realize your machine learning training goals



Continue your journey to becoming a machine learning expert



☑ Digital
⌚ 8 hrs, 30 mins
📊 Intermediate
👉 Optional



☑ Digital
⌚ 8 hrs, 30 mins
📊 Fundamental
👉 Optional



☑ Digital
⌚ 1 hrs, 20 mins
📊 Advanced
👉 Optional



☑ Digital
⌚ 2 hrs, 30 mins
📊 Advanced
👉 Optional



AWS machine learning expertise unlocked!

Explore the Machine Learning Path: Data Scientist courses

- ✓ The Elements of Data Science
- ✓ Data Science Capstone: Real-world ML Decisions
- ✓ Machine Learning Data Readiness
- ✓ Developing Machine Learning Applications
- ✓ Practical Data Science with Amazon SageMaker
- ✓ The Machine Learning Pipeline on AWS
- ✓ Machine Learning: Security
- ✓ Exam Readiness: AWS Certified Machine Learning – Specialty
- ✓ AWS Certified Machine Learning – Specialty Certification

Advance your skills with additional courses

- ✓ Math for Machine Learning
- ✓ Linear and Logistics Regression
- ✓ Speaking of: Machine Learning Translation and NLP
- ✓ Seeing Clearly: Computer Vision Theory



The Elements of Data Science

[Sign up or start the course »](#)

About this course

Building and improving machine learning models are core skills required of any data scientist in the machine learning field.

In this first course, you'll receive the robust introduction you need for a solid machine learning foundation, which includes training on problem formulation, exploratory data analysis, feature engineering, model training, tuning and debugging, as well as model evaluation and productionizing.



Start


Finish



Skills learned

- ✓ Problem formulation
- ✓ Exploratory data analysis
- ✓ Feature engineering
- ✓ Model training
- ✓ Model tuning and debugging
- ✓ Model evaluation
- ✓ Model deployment/productionizing

 Digital

 8 hrs

 Intermediate

 Recommended

Data Science Capstone: Real-world ML Decisions

[Sign up or start the course »](#)

About this course

Address real-world challenges that Amazon's own data scientists have solved with machine learning, like predicting delivery routes and determining gift-wrapping eligibility. Plus, this course will give you actual experience building, training, and testing a machine learning model. You'll clean data, conduct feature engineering, and compare algorithms just like an Amazonian.







Start

Finish



Skills learned

- ✓ Feature engineering
- ✓ Model training
- ✓ Data preparation and cleaning

-  Digital
-  50 mins
-  Advanced
-  Recommended

Machine Learning Data Readiness

[Sign up or start the course »](#)

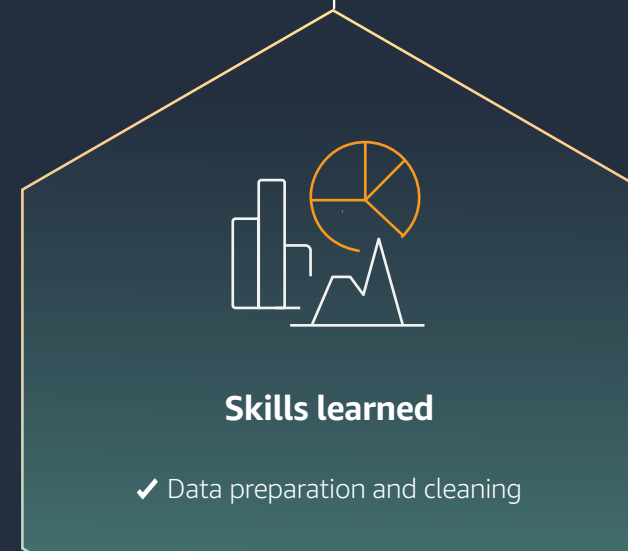
About this course

What is machine learning data readiness? Find out—then identify data readiness and perform readiness exercises across three case studies with the KNIME Analytics tool.

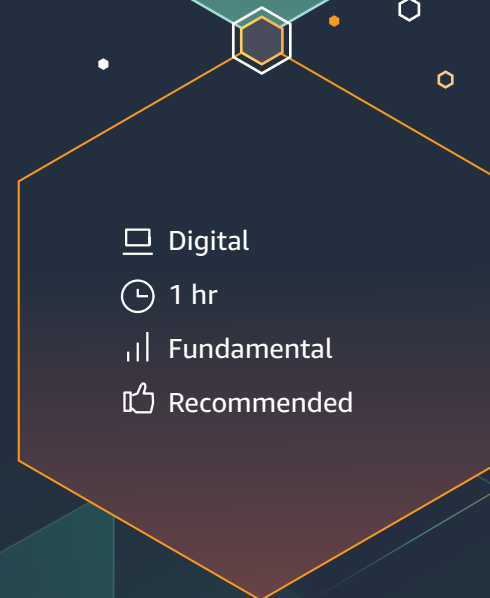


Start

Finish



✓ Data preparation and cleaning



Developing Machine Learning Applications

[Sign up or start the course »](#)

About this course

Harness the power of the Amazon SageMaker machine like so many expert Amazonians do. Train and tune models, learn how to use pre-built algorithms and how to build your own for specific use cases like recommended systems and anomaly detection.



Start


Finish



Skills learned

- ✓ Model training
- ✓ Model tuning and debugging
- ✓ Amazon SageMaker

 Digital

 2 hrs, 30 mins

 Advanced

 Recommended

Practical Data Science with Amazon SageMaker

[Sign up or start the course »](#)

About this course

See real-world use cases in action and explore the data science process as it relates to the practical use of Amazon SageMaker—from analyzing and visualizing a data set to prepping data and engineering features. Learn model building, training, tuning, and deployment. This virtual instructor-led course lets you ask questions and interact with an expert, providing an engaging and timely learning experience.



Start

Finish



Skills learned

- ✓ Exploratory data analysis
- ✓ Feature engineering
- ✓ Model training
- ✓ Model tuning and debugging
- ✓ Model evaluation
- ✓ Model deployment/productionizing
- ✓ Data preparation and cleaning
- ✓ Amazon SageMaker

Virtual or Classroom

1 day

Intermediate

Recommended

The Machine Learning Pipeline on AWS

[Sign up or start the course »](#)

About this course

This course features a hands-on, project-based approach, where you'll have the opportunity to solve a real business problem with machine learning. Using knowledge gained from instructor-led presentations and demo exercises, you can choose and solve one of three business problem projects: 1) predicting flight delays, 2) recommending products based on customer data, or 3) detecting credit card fraud. Course can be completed in person or through a virtual classroom—with both options allowing for questions and interaction with the instructor.



Start

Finish



Skills learned

- ✓ Problem formulation
- ✓ Data preparation and cleaning
- ✓ Amazon SageMaker
- ✓ Feature engineering
- ✓ Model training
- ✓ Model tuning and debugging
- ✓ Model evaluation
- ✓ Model deployment/productionizing

Virtual or Classroom

4 days

Intermediate

Recommended

Machine Learning Security

[Sign up or start the course »](#)

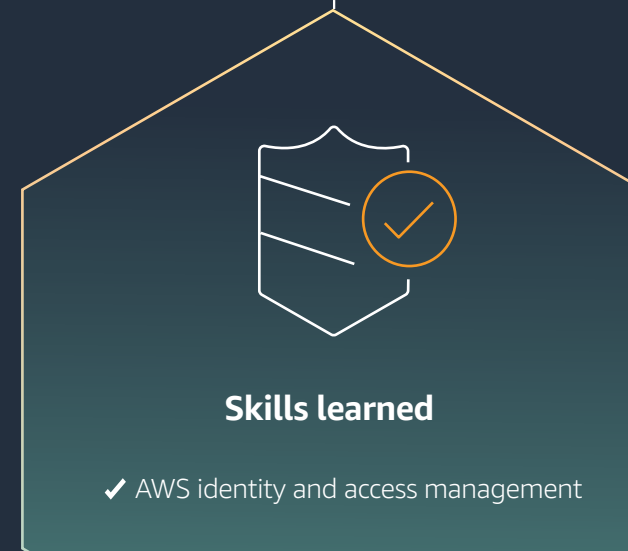
About this course





Safeguard your machine learning projects with the comprehensive security of AWS. Learn about NACLs, security groups, identity and access management best practices, encryption, and more products and services to protect your machine learning applications.



Start

Finish



-  Digital
-  30 mins
-  Intermediate
-  Recommended

Exam Readiness: AWS Certified Machine Learning—Specialty

[Sign up or start the course »](#)

About this course

Prepare for the AWS Certified Machine Learning – Specialty exam either in the classroom or with a free on-demand digital course. Learn how to interpret exam questions, apply concepts being tested by the exam, and allocate your study time. The course includes sample exam questions with explanations that will help you more easily determine correct answers and eliminate incorrect responses.



Start


Finish



Skills learned

- ✓ Exploratory data analysis
- ✓ Data engineering
- ✓ ML implementation and operations
- ✓ Model training
- ✓ Model evaluation

 Digital

 6 hrs, 30 mins

 Advanced

 Recommended

AWS Certified Machine Learning—Specialty Certification

[Sign up or start the course »](#)

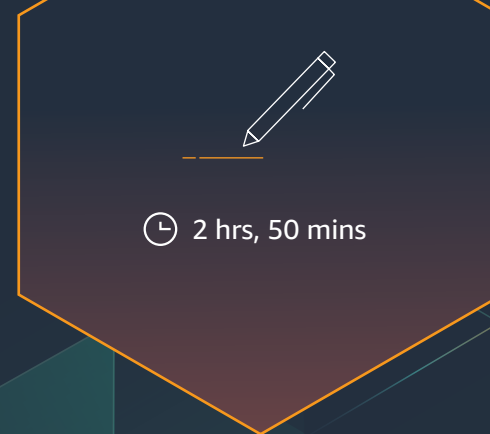
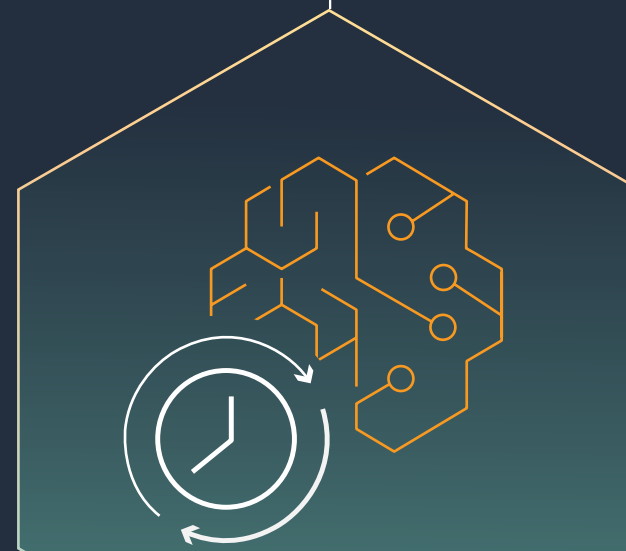
About this exam

What better way to validate your machine learning skills? Take the AWS Certified Machine Learning – Specialty exam to demonstrate that you possess the talent and know-how to build, train, tune, and deploy machine learning models using the AWS Cloud. This industry-recognized credential also shows that you can select, justify, identify and approach, design, and implement a machine learning solution for a given business problem.



Start

Finish



Be the data scientist with industry-recognized machine learning credibility

About the certification

Once you've validated your skills in data science by earning the AWS Certified Machine Learning – Specialty certification, you can quickly put your new knowledge into practice. Your new skills can also help you advance your career and unlock new professional opportunities.

Certified professionals and specialists are eligible to promote their digital badges, attend exclusive AWS-sponsored certification event invites, receive discounts on additional AWS Training and Certification courses, and attain many more practical benefits.



Start

Finish



Skills learned

- ✓ Problem formulation
- ✓ Exploratory data analysis
- ✓ Feature engineering
- ✓ Model training
- ✓ Model tuning and debugging
- ✓ Model evaluation
- ✓ Model deployment/productionizing
- ✓ Data preparation and cleaning
- ✓ Amazon SageMaker
- ✓ AWS identity and access management
- ✓ Data engineering
- ✓ Modeling
- ✓ ML implementation and operations

aws 
certified

Take your machine learning training to the next level


Expand your knowledge with additional training opportunities that can help transform you into a machine learning expert.

Math for Machine Learning

Sign up »

Explore modern machine learning subjects like vectors and matrices, linear algebra, probability theorems, univariate calculus, and multivariate calculus.

 Digital

 8 hrs, 30 mins


 Intermediate

Linear and Logistic Regression

Sign up »

Learn how to make accurate predictions, using linear models for regression, least squares error, maximum likelihood estimate, regularization, logistic regression, empirical loss minimization, and optimization methods.

 Digital

 8 hrs, 30 mins


 Intermediate

Speaking of: Machine Learning Translation and NLP

Sign up »

Discover how human language and machine learning work together with neural networks and natural-language processing functions like automatic speech recognition, natural- and fluent-language translation, and insights.

 Digital

 1 hr, 20 mins


 Advanced

Seeing Clearly: Computer Vision Theory

Sign up »

Find out how computer vision works with machines through topics such as automatic recognition, deep-learning-enabled cameras, satellite image classification, and more.

 Digital

 2 hrs, 30 mins

 Advanced

AWS is how you innovate with machine learning

More machine learning happens on AWS than anywhere else.*
When you train with AWS, you train on the same leading-edge technology that helps more than one million active customers innovate at will.

Our Machine Learning Path: Data Scientist offers curated training courses built on the curriculum that Amazon data scientists have used to build their own highly relevant skills.

Now, it's your turn. Take the [courses](#), build your own skills and gain relevant machine learning knowledge anytime, anywhere.

*Deep Learning on AWS Guidebook, Nucleus Research, October 2019



Start your machine learning journey today

The lack of adequately trained talent is a growing barrier to the widespread adoption of machine learning. But with training from AWS, you can use the machine learning skills gap to your advantage. Gain the essential skills you need to accelerate your career and become the innovative problem-solver others rely on.

Explore the AWS Training and Certification Machine Learning Path: Data Scientist today!

