

# Race and Jobs at Risk of Being Automated in the Age of COVID -19

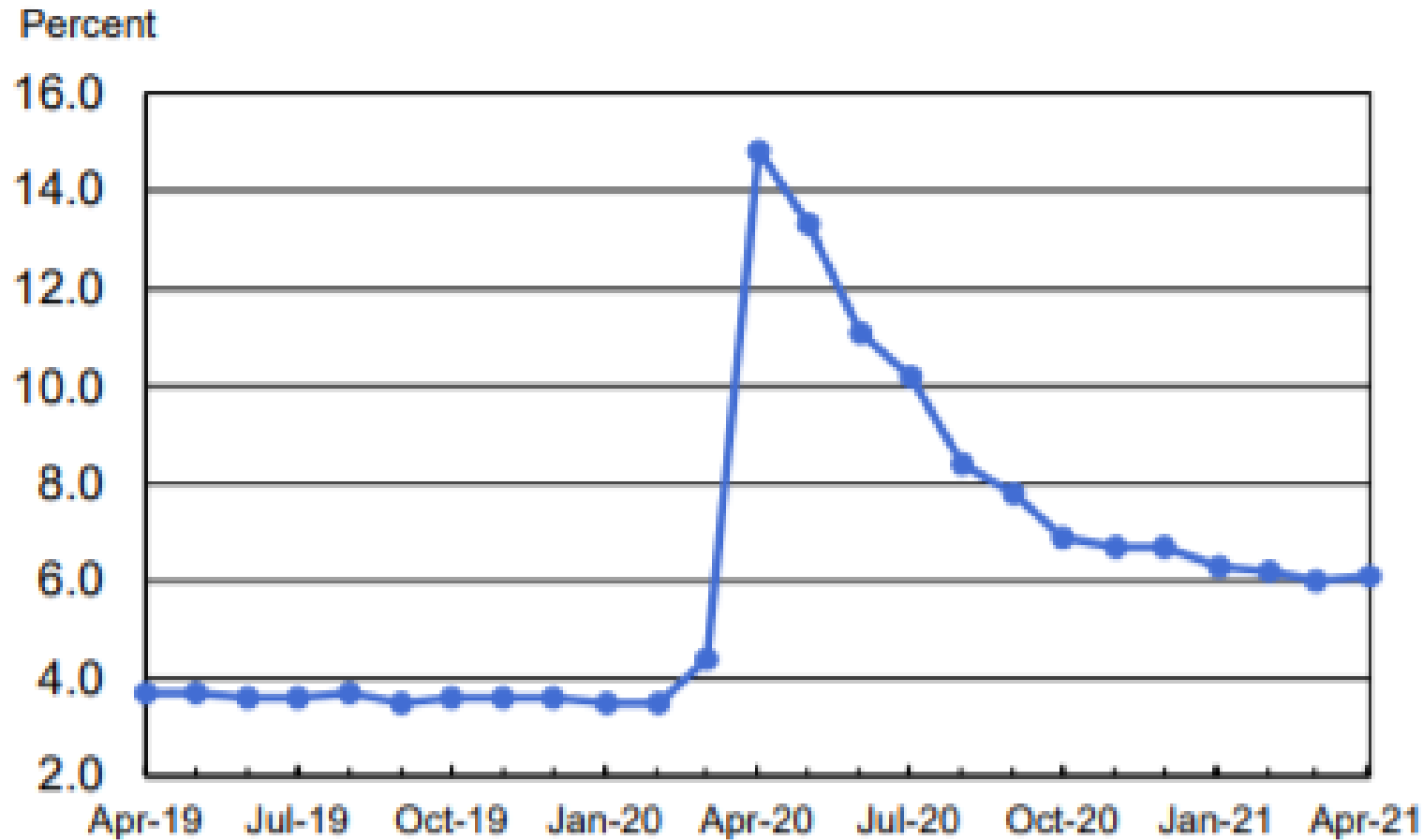
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# Unemployment Situation

# U.S. Unemployment Rate April 2019 – April 2021

**Chart 1. Unemployment rate, seasonally adjusted, April 2019 – April 2021**



# U.S. Unemployment Rate – Black and Hispanic Women

Year	Month	U.S. Unemployment Rate	Black Female Unemployment Rate	Percentage Point Difference	Hispanic Female Unemployment Rate	Percentage Point Difference
2020	January	3.6	5.2	1.6	4.4	0.8
	February	3.5	4.8	1.3	4.9	1.4
	March	4.4	5.2	0.8	6	1.6
	April	14.7	16.4	1.7	20.2	5.5
	May	13.3	16.5	3.2	19	5.7
	June	11.1	14	2.9	15.3	4.2
	July	10.2	13.5	3.3	14	3.8
	August	8.4	12	3.6	10.5	2.1
	September	7.8	11.1	3.3	11	3.2
	October	6.9	9.2	2.3	9	2.1
	November	6.7	9	2.3	8.2	1.5
	December	6.7	8.4	1.7	9.1	2.4
2021	January	6.3	8.5	2.2	8.8	2.5
	February	6.2	8.9	2.7	8.5	2.3
	March	6	8.7	2.7	7.3	1.3
	April	6.1	8.6	2.5	7.5	1.4
	Average	7.62	Average	2.38	Average	2.69

# Jobs at High Risk of Automation

# Jobs that Employ the Most Americans at High Risk of Being Automated

Occupation	Total Employed	Automation Risk Score	Total % Employed	% of Female Workforce	% of White Workforce	% of Black Workforce	% of Asian Workforce	% of Hispanic Workforce
1 Cashiers	3,164,000	97.0%	2.01%	3.04%	1.79%	2.92%	2.26%	2.75%
2 Retail salespersons	3,105,000	92.0%	1.97%	2.03%	2.00%	1.99%	1.36%	2.09%
3 Secretaries and administrative assistants	2,688,000	96.0%	1.71%	3.38%	1.87%	1.21%	0.92%	1.30%
4 Laborers and freight, stock, and material movers	2,235,000	85.0%	1.42%	0.65%	1.32%	2.28%	0.59%	1.86%
5 Construction laborers	2,051,000	88.0%	1.30%	0.10%	1.43%	0.91%	0.32%	3.45%
6 Waiters and waitresses	2,038,000	94.0%	1.29%	1.96%	1.26%	1.17%	1.51%	1.72%
7 Cooks	2,031,000	81.0%	1.29%	1.14%	1.17%	1.90%	1.23%	2.69%
8 Accountants and auditors	1,964,000	94.0%	1.25%	1.64%	1.24%	0.86%	2.30%	0.63%
9 Office clerks, general	1,355,000	96.0%	0.86%	1.51%	0.82%	0.95%	1.14%	1.02%
10 Receptionists and information clerks	1,288,000	96.0%	0.82%	1.55%	0.80%	1.02%	0.58%	1.01%
11 Sales, wholesale and manufacturing	1,281,000	85.0%	0.81%	0.47%	0.93%	0.39%	0.49%	0.50%
12 Grounds maintenance workers	1,273,000	95.0%	0.81%	0.11%	0.89%	0.54%	0.11%	2.00%
13 Production workers, all other	1,141,000	92.0%	0.72%	0.44%	0.69%	0.95%	0.64%	1.01%
14 Real estate brokers and sales agents	1,095,000	91.5%	0.70%	0.87%	0.76%	0.45%	0.56%	0.42%
15 Food preparation workers	1,079,000	87.0%	0.68%	0.86%	0.65%	0.74%	0.87%	1.09%

Source: U.S. Bureau of Labor Statistics (2019)

# Jobs that Employ the Most Americans at High Risk of Being Automated (Continued)

Occupation	Total Employed	Automation Risk Score	Total % Employed	% of Female Workforce	% of White Workforce	% of Black Workforce	% of Asian Workforce	% of Hispanic Workforce
16 Bookkeeping, accounting, and auditing clerks	1,015,000	98.0%	0.64%	1.21%	0.71%	0.36%	0.54%	0.48%
17 Miscellaneous agricultural workers	866,000	87.0%	0.55%	0.28%	0.65%	0.12%	0.10%	1.69%
18 Inspectors, testers, sorters, and weighers	802,000	98.0%	0.51%	0.39%	0.51%	0.48%	0.42%	0.51%
19 Taxi drivers and chauffeurs	790,000	89.0%	0.50%	0.18%	0.36%	1.20%	1.01%	0.67%
20 Property, real estate, and community managers	780,000	81.0%	0.50%	0.50%	0.53%	0.36%	0.34%	0.36%
21 Insurance sales agents	595,000	92.0%	0.38%	0.41%	0.39%	0.31%	0.33%	0.29%
22 Industrial truck and tractor operators	571,000	93.0%	0.36%	0.07%	0.32%	0.76%	0.09%	0.65%
23 Billing and posting clerks	459,000	96.0%	0.29%	0.55%	0.31%	0.24%	0.21%	0.26%
24 Paralegals and legal assistants	444,000	94.0%	0.28%	0.54%	0.28%	0.27%	0.29%	0.28%
25 Couriers and messengers	402,000	94.0%	0.26%	0.11%	0.24%	0.36%	0.17%	0.31%
26 Operating engineers, construction equip. operators	375,000	95.0%	0.24%	0.01%	0.26%	0.17%	0.03%	0.20%
27 Combined food prep and serving workers	372,000	92.0%	0.24%	0.31%	0.21%	0.38%	0.20%	0.27%
28 First-line housekeeping supervisors, janitorial workers	352,000	94.0%	0.22%	0.20%	0.23%	0.27%	0.11%	0.35%
29 Cafeteria attendants and bartender helpers	338,000	91.0%	0.21%	0.18%	0.21%	0.22%	0.20%	0.42%
30 Hosts and hostesses, restaurant and lounge	322,000	97.0%	0.20%	0.36%	0.20%	0.14%	0.13%	0.21%
Total/Average	36,271,000	92.0%	23.02%	25.07%	23.03%	23.91%	19.05%	30.50%

Source: U.S. Bureau of Labor Statistics (2019)

# Overrepresentation of Black Workers

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- Black people account for 13% of the U.S. labor force.
- Black workers are overrepresented in 11 of the 30 jobs that employ the most Americans and are at high risk of being automated:
  1. taxi drivers and chauffeurs (29.5%)
  2. industrial truck and tractor operators (25.8%)
  3. laborers and freight, stock and material movers (19.8%)
  4. food preparation and serving workers (19.6%)
  5. cooks (18.1%)
  6. cashiers (17.9%)
  7. couriers and messengers (17.4%)
  8. production workers (16.1%)
  9. receptionists and information clerks (15.4%)
  10. first line supervisors of housekeeping and janitorial workers (15%)
  11. office clerks (13.6%).



# Overrepresentation of Hispanic Workers

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- Hispanic people account for 18% of the U.S. labor force.
- Hispanic workers are overrepresented in two additional occupations:
  12. food preparation occupations (28.1%)
  13. dining room and cafeteria attendants and bartenders (34.2%)
- These 13 positions employed 6.4 million Black and Hispanic workers in 2019.

# Jobs at Low Risk of Automation

# Jobs that Employ the Most Americans at Low Risk of Being Automated

Occupation	Total Employed	Automation Risk Score	Total % Employed	% of Female Workforce	% of White Workforce	% of Black Workforce	% of Asian Workforce	% of Hispanic Workforce
1 Elementary and middle school teachers	3,604,000	0.4%	2.29%	3.92%	2.49%	1.90%	0.92%	1.33%
2 Registered nurses	3,242,000	0.9%	2.06%	3.89%	2.01%	2.07%	2.91%	0.84%
3 Chief executives	1,602,000	1.5%	1.02%	0.60%	1.16%	0.34%	0.91%	0.36%
4 First-line supervisors of office and admin. support	1,306,000	1.4%	0.83%	1.21%	0.86%	0.90%	0.47%	0.63%
5 Marketing and sales managers	1,184,000	1.3%	0.75%	0.78%	0.83%	0.37%	0.65%	0.38%
6 Physicians and surgeons	1,098,000	0.4%	0.70%	0.61%	0.65%	0.46%	1.93%	0.30%
7 Other teachers and instructors	1,017,000	1.0%	0.65%	0.89%	0.65%	0.61%	0.61%	0.43%
8 Secondary school teachers	1,015,000	0.8%	0.64%	0.77%	0.72%	0.38%	0.33%	0.32%
9 Education administrators	958,000	1.3%	0.61%	0.88%	0.62%	0.76%	0.31%	0.41%
10 First-line production supervisors, operating workers	844,000	1.6%	0.54%	0.24%	0.55%	0.53%	0.31%	0.52%
11 Medical and health services managers	677,000	0.7%	0.43%	0.64%	0.44%	0.44%	0.38%	0.29%
12 Computer systems analysts	663,000	0.7%	0.42%	0.36%	0.37%	0.33%	1.31%	0.20%
13 Preschool and kindergarten teachers	655,000	0.7%	0.42%	0.87%	0.41%	0.53%	0.33%	0.35%
14 Engineers, all other	582,000	1.4%	0.37%	0.11%	0.34%	0.16%	1.17%	0.21%
15 Social and community service managers	470,000	0.7%	0.30%	0.43%	0.31%	0.30%	0.15%	0.18%

Source: U.S. Bureau of Labor Statistics (2019)

# Jobs that Employ the Most Americans at Low Risk of Being Automated (Continued)

Occupation	Total Employed	Automation Risk Score	Total % Employed	% of Female Workforce	% of White Workforce	% of Black Workforce	% of Asian Workforce	% of Hispanic Workforce
16 Clergy	413,000	0.8%	0.26%	0.12%	0.27%	0.26%	0.24%	0.11%
17 Mechanical engineers	351,000	1.1%	0.22%	0.03%	0.23%	0.09%	0.40%	0.11%
18 Pharmacists	341,000	1.2%	0.22%	0.28%	0.18%	0.18%	0.73%	0.03%
19 Human resources managers	321,000	0.6%	0.20%	0.32%	0.20%	0.18%	0.22%	0.12%
20 First-line mechanics supervisors, installers, repairers	272,000	0.3%	0.17%	0.03%	0.19%	0.14%	0.04%	0.16%
21 Psychologists	234,000	0.4%	0.15%	0.25%	0.17%	0.07%	0.08%	0.09%
22 Securities, commodities, and financial services sales	231,000	1.6%	0.15%	0.09%	0.16%	0.06%	0.17%	0.10%
23 Speech-language pathologists	180,000	0.6%	0.11%	0.23%	0.14%	0.04%	0.04%	0.04%
24 Lodging managers	162,000	0.4%	0.10%	0.11%	0.11%	0.06%	0.15%	0.09%
25 Logisticians	154,000	1.2%	0.10%	0.07%	0.10%	0.12%	0.04%	0.05%
26 Occupational therapists	136,000	0.4%	0.09%	0.16%	0.08%	0.07%	0.16%	0.05%
27 Dietitians and nutritionists	128,000	0.4%	0.08%	0.16%	0.08%	0.10%	0.07%	0.04%
28 Training and development specialists	125,000	1.4%	0.08%	0.09%	0.08%	0.10%	0.05%	0.05%
29 First-line supervisors of police and detectives	83,000	0.4%	0.05%	0.01%	0.06%	0.03%	0.00%	0.02%
30 Public relations and fundraising managers	73,000	1.5%	0.05%	0.07%	0.05%	0.03%	0.00%	0.00%
Total/Average	22,121,000	0.9%	14.04%	18.21%	14.51%	11.65%	15.08%	7.79%

Source: U.S. Bureau of Labor Statistics (2019)

# Overrepresentation of Black Workers

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- Black people account for 13% of the U.S. labor force.
- Black workers are overrepresented in 5 of the 30 jobs that employ the most Americans and are at low risk of being automated:
  1. preschool and kindergarten teachers (15.7%)
  2. logisticians (15.5%)
  3. training and development specialists (15.4%)
  4. education administrators (15.3%)
  5. dietitians and nutritionists (15.2%)
- These occupations employ 311,985 Black workers.

# Overrepresentation of Hispanic Workers

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- Hispanic workers are not overrepresented in any of the 30 occupations that employ the most Americans and are at low risk of automation.

# From High Risk to Low-Risk Occupations

# Experiential Learning Programs

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- Dillard University
- Alabama A&M University
- Kentucky State University
- Atlanta Metropolitan State College



# Race and Jobs at Risk of Being Automated in the Age of COVID -19

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