

The Impact of Automation on Black Jobs

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Almost a quarter of African-American workers are concentrated in just 20 occupations that are at high risk to automation, such as cashiers, retail salespersons, cooks, and security guards.

The 20 occupations with a high risk of automation over the next 10-20 years (80-99 percent) that employ the most African Americans account for 24.1 percent of all jobs currently held by African-Americans in the United States (4,334,300).

By comparison, the 20 occupations with a low risk of automation (0-20 percent) that employ the most African Americans account for 13.8 percent of African-American jobs (2,489,400).

The numbers below do not reflect Heavy and Tractor-Trailer Truck Drivers because the automation risk of 0.79 falls just below our 0.80 floor. Heavy and Tractor-Trailer Truck Drivers alone account for 1.7 percent of the entire Black workforce (299,000 Black workers).

Jobs at High-Risk to Automation (80-99%) That Employ the Most African Americans

	Occupation	# of Black Jobs	Automation Risk
1	Cashiers	580,300	0.97
2	Retail Salespersons	407,400	0.92
3	Laborers & Freight, Stock, & Material Movers, Hand	378,100	0.85
4	Cooks	377,000	0.81-0.96
5	Security Guards & Gaming Surveillance Officers	280,600	0.84
6	Secretaries & Administrative Assistants	236,000	0.96
7	Waiters & Waitresses	196,000	0.94
8	Miscellaneous Assemblers & Fabricators	192,600	0.93-0.98
9	Office Clerks, General	189,100	0.96
10	Receptionists & Information Clerks	173,000	0.96
11	Production Workers, All Others	165,500	0.92
12	Industrial Truck & Tractor Operators	157,300	0.93
13	Accountants & Auditors	151,000	0.94
14	Food Preparation Workers	149,000	0.87
15	Construction Laborers	145,900	0.88
16	Taxi Drivers & Chauffeurs	143,500	0.89
17	Bus Drivers	122,600	0.89
18	Ground Maintenance Workers	107,400	0.95
19	Inspectors, Testers, Sorters, Samplers & Weighers	94,000	0.98
20	Shipping and Receiving Clerks	88,000	0.98

Jobs at Low-Risk to Automation (0-20%) That Employ the Most African Americans

	Occupation	# of Black Jobs	Automation Risk
1	Registered Nurses	369,100	0.009
2	Elementary & Middle School Teachers	328,200	0.0044/0.17
3	Childcare Workers	218,900	0.084
4	Licensed Practical & Licensed Vocational nurses	197,900	0.058
5	First-Line Supervisors of Office & Administrative Support Workers	150,100	0.014
6	Food Service Managers	118,000	0.083
7	Hairdressers, Hairstylists, & Cosmetologists	99,900	0.11
8	Post-Secondary Teachers	99,400	0.032
9	Preschool & Kindergarten Teachers	86,500	0.0074/0.15
10	Police & Sheriff's Patrol Officers	85,000	0.098
11	Financial Managers	82,600	0.069
12	Management Analysts	81,200	0.13
13	First-Line Supervisors of Non-Retail Sales Workers	80,200	0.075
14	Physicians & Surgeons	79,600	0.0042
15	Medical & Health Service Managers	78,300	0.0073
16	First-Line Supervisors of Production & Operation Workers	74,000	0.016
17	Chefs & Head Cooks	67,600	0.1
18	General & Operations Managers	67,400	0.16
19	Social & Community Service Managers	64,800	0.0067
20	Software Developers, Systems Software	60,800	0.13

This data is just the beginning. Next steps include a more comprehensive examination of additional occupations, a comparison of the impact of automation on different racial groups, an analysis of the risk of automation using an alternative methodology that examines the probability of

automation of particular tasks (rather than entire jobs), and policy recommendations to help workers, entrepreneurs, companies, and governments mitigate challenges and take advantage of new opportunities to thrive in the new economy.

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**The source of the Black job data is the Bureau of Labor Statistics, [Employed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity](#), last modified Feb. 8, 2017, and the source of the automation risk data is Carl Benedikt Frey and Michael A. Osborne, [The Future of Employment: How Susceptible are Jobs to Computerization?](#) September 17, 2013 (appendix p. 57-72). See also Center for Global Policy Solutions, [Stick Shift: Autonomous Vehicles, Driving Jobs, and the Future of Work](#), March 2017 (finding that “Blacks rely on driving jobs more than other racial/ethnic groups” and providing extensive analysis of the impact of autonomous vehicles on Americans who work as drivers and policy recommendations).

***This data brief was revised on November 14, 2017. Frey and Osborne’s automation probability is organized with a version of the Standard Occupational Classification (SOC), which has an overlapping but a slightly more detailed classification of occupations than the Bureau of Labor Statistics Current Population Survey (CPS) occupations racial data. Thus, for some subcategories of occupations we have automation risk, but we have racial data only for the larger occupational category. Our revision eliminated subcategories with an automation risk under 0.80, and applied the racial breakdown of the CPS category of an occupation to all of the SOC subcategories of the occupation. As a result of the revision, we found that 24.1 percent (rather than 26.7 percent) of Black workers are concentrated in just 20 occupations with a high risk of automation.