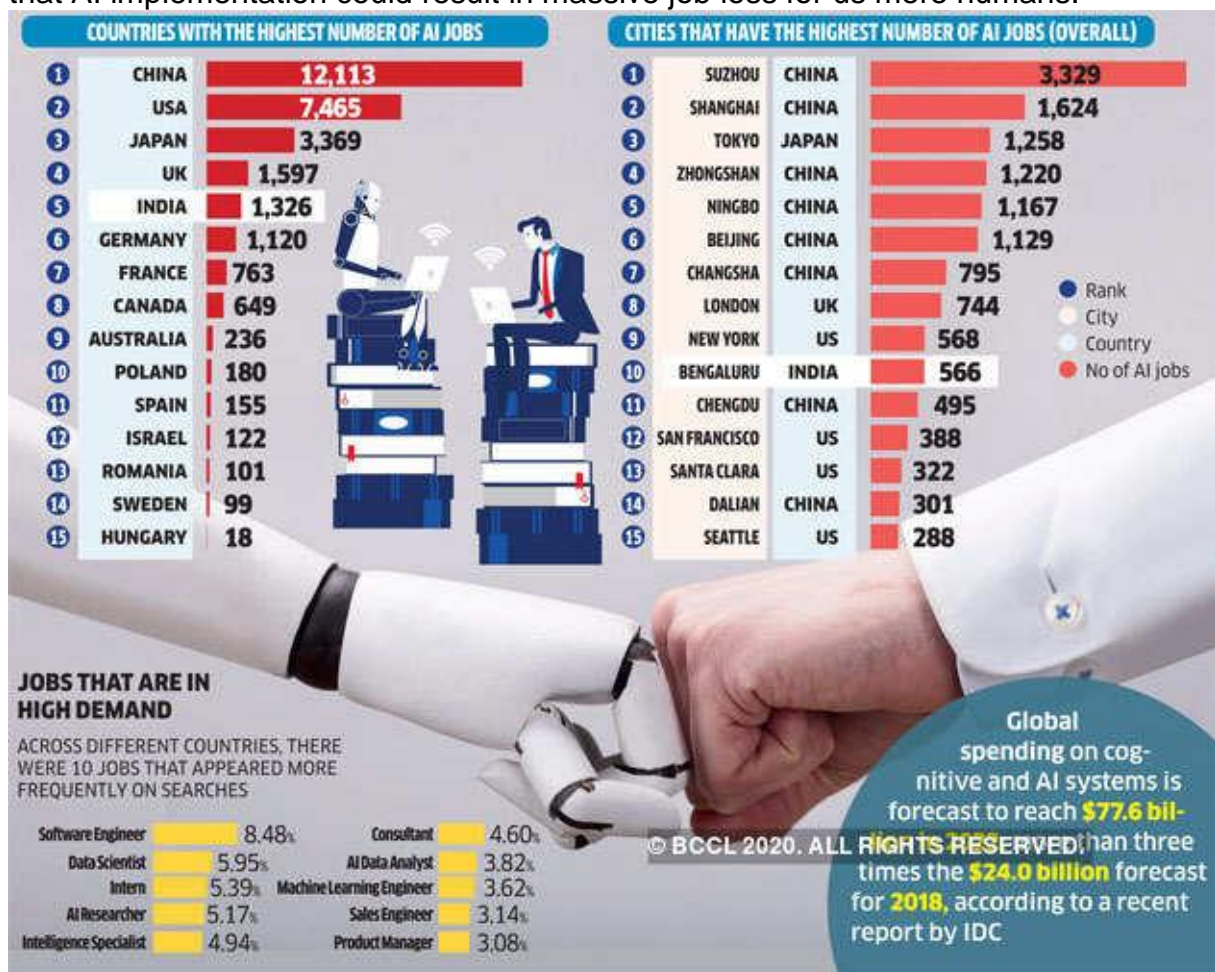


Source : <https://www.futureoftech.org/artificial-intelligence/7-working-in-an-ai-future/>

In the effort to improve workflow efficiency, safety and security, businesses are increasingly turning to AI and machine learning to bust spam, beef up firewalls and automate repetitive administrative tasks.

As a result of this shift in businesses across a variety of industries, many people fear that AI implementation could result in massive job loss for us mere humans.



At-Risk Occupations

Occupations that involve a high degree of repetitive work are at higher risk of being shifted to AI-driven applications. That includes desk work as well as jobs that involve repetitive physical labor.



Career spotlight

Working in an AI Future



Soft Skills

Jobs that involve high levels of creativity and human interaction—the so-called “soft skills”—are still considered relatively safe, although AI has already begun to augment the roles of communicators, teachers, medical providers, social workers, dietitians and clergy. Jobs with a high degree of unpredictability and variability, such as mechanics and plumbers, are also considered insulated from AI and automation over the next several decades

Emerging Job Markets

Many jobs already in existence will probably see higher demand as the need for these positions grows, including software developers, computer engineers, data scientists, cybersecurity experts and data taggers.

AI is also sure to create new jobs that involve technology not yet in wide use: chatbot designers, language tone and context trainers, and automation ethicists, to name a few.

Machine Learning Engineer

Machine learning engineers write algorithms and build AI systems and models that can process and classify data from massive, disorganized datasets. This is the technology behind internet searches that also produce “suggested for you” matches. Using data mining, natural language processing and ranking systems, engineers at organizations such as Pinterest, Netflix and Google build systems that evaluate improvements to the matching algorithms and shift as a user’s interaction with the service changes. A significant component of the job involves monitoring established systems to retrain and adjust them as necessary.

Education and experience: Machine learning engineers must be fluent in the principles of data science, computer science and software engineering, and many positions require at least five years of experience in these fields. Desired programming languages typically include Python, Java, C++ and TensorFlow. A bachelor’s degree or above is typically required.



Career spotlight

Working in an AI Future



Data Scientist: Speech and Language Processing

Salary range: \$120,000-\$136,000

As applications that use automated speech and writing become more prevalent, companies are recruiting data scientists who specialize in developing AI-based language processing systems. Job duties include building language models, designing algorithms for the company's products, training the algorithms, conducting data analysis, researching ways to improve the system's performance and accuracy, and performing ongoing maintenance of launched systems.

Education and experience: Candidates with a computer science and electrical engineering background are highly desired for these positions, usually with either a recent Ph.D. or a master's degree and three to five years of experience. Familiarity with statistical and machine learning methodologies is preferred. Candidates must be proficient in SQL, Perl or Python, Matlab or R and C/C++.

Data Associate/AI Trainer

Salary range: \$14-\$20 per hour

In the pursuit of increasingly natural interactions between humans and their virtual assistants, companies are seeking skilled communicators to help algorithms refine these interactions. AI trainers help AI systems better understand user requests. These trainers also compose a library of potential responses and work side by side with machine learning engineers to tag and annotate data for the AI's use. Trainers monitor, analyze and troubleshoot live conversations to help the system learn intent and context, improve conversation flow and correct or complete conversations.

Education and experience: Strong verbal and written language skills are strongly preferred for these positions. Experience with coding or engineering is usually not necessary, but people working in these positions should be comfortable working with computers and programs such as Excel, Word and Google Sheets. A bachelor's degree in English, linguistics or a related field is usually preferred, but one to three years of experience as a transcriptionist, transcriber or annotator may substitute for a degree.



Just **15%** of organizations use AI today; by next year, that number will be 31%

cmo.com/features/articles/2018/2/26/adobe-2018-digital-trends-report-findings.html#gs.kqGOKgc



AI-focused startups have seen a **14-fold** increase since 2000

cdn.aiindex.org/2017-report.pdf

Consumers often don't know when they are interacting with AI systems, as only one-third of them said they use an AI-powered service or device, when the number who actually do is

77%

pega.com/system/files/resources/2017-11/what-consumers-really-think-of-ai-infographic.pdf



Global spending on AI is projected to surge to more than **\$7 billion** per year by 2022, more than double the \$2 billion spent this year

businesswire.com/news/home/20180131005068/en/Juniper-Research-Retailer-Spending-AI-Grow-Fourfold



Artificial Intelligence Job Analysis

2.535.009

AI, automation and robotics jobs will be created by early 2030's

13.375.363

jobs are at risk from automation replacement by early 2030's

newly created positions can only fill **19%** of the jobs lost to robotics

JOB CATEGORIES

ICT

47% of vacancies



Engineering

13% of vacancies

Installation, Repair, and Maintenance

21% of vacancies



MOST POSTED JOB ROLES

System Developers and Analysts

22% of vacancies

Programmers

11% of vacancies

Consultants and Specialists

5% of vacancies