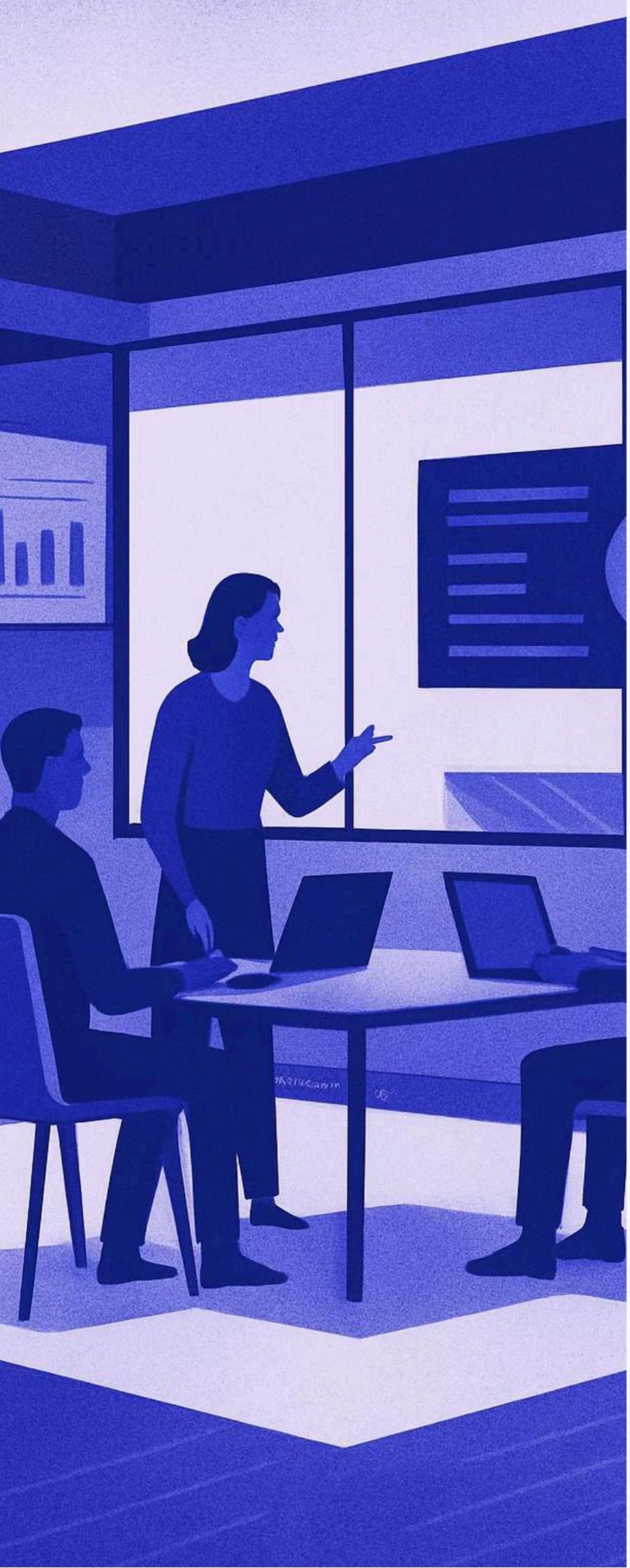
Towards 2030: Future Industries and the Path to Success



Changing World, Changing Professions

In this era called the Fourth Industrial Revolution, artificial intelligence, automation, the climate crisis, and digital transformation are fundamentally reshaping the business world. According to McKinsey Global Institute's 2025 report, 30% of existing jobs will be affected by automation by 2030. However, this transformation brings not only job losses, but also the emergence of entirely new job categories. According to the World Economic Forum's projections, 97 million new job positions will be created by 2030. The difference between winners and losers comes down to choosing the right sector and investing in the right skills.

🌍 Global Transformation

Artificial intelligence, robotics, and automation will contribute 15.7 trillion dollars to global GDP by 2030 (PwC estimate). Every sector is affected by this transformation; finance, healthcare, manufacturing, and education are among the fastest-changing areas.

💼 New Job Categories

Roles such as "Prompt Engineer," "AI Ethics Consultant," "Sustainability Director," and "Quantum Computer Specialist" did not exist 5 years ago, yet today they are among the most in-demand positions. According to LinkedIn data, AI-related job postings increased by 3x between 2023 and 2025.

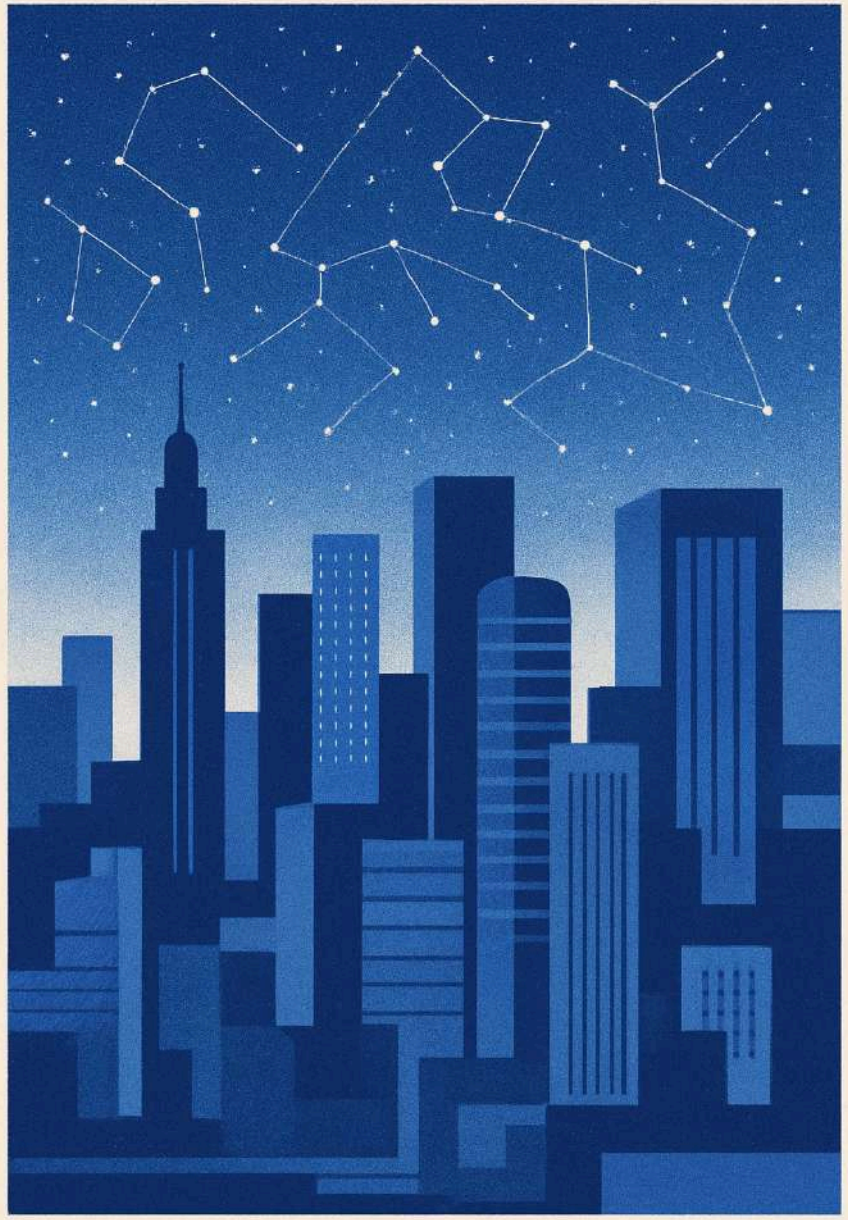
🎯 Determining Strategic Factors

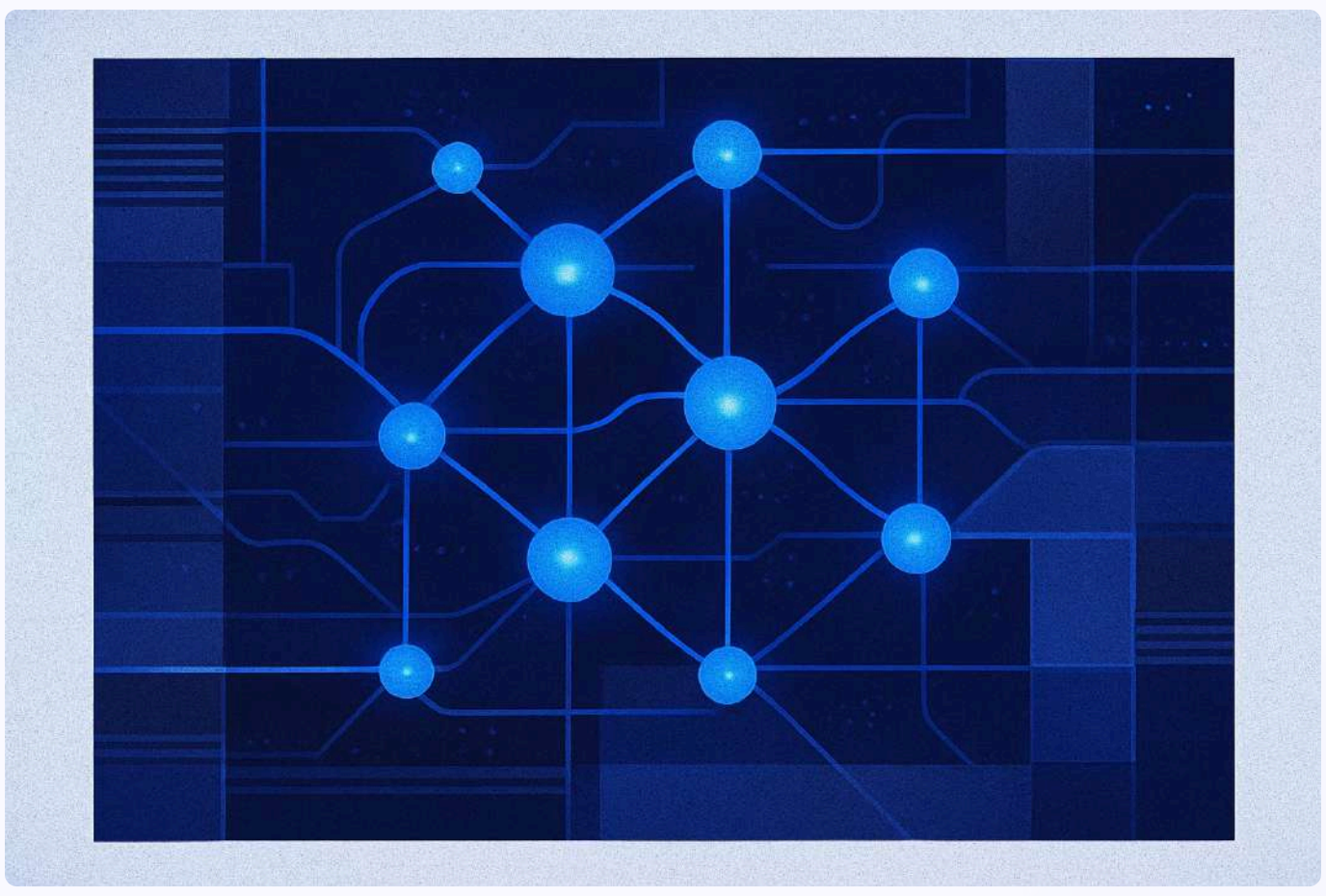
The sector you work in, the city you live in, and the skills you have directly determine your income level and career speed. In the U.S., the median salary in the technology sector is 2.5 times the national median.

SECTION 1

Future Star Sectors

2030 Vision – Which sectors will stand out and why?





SECTOR 1

Artificial Intelligence and Machine Learning 🚀

It is becoming the core tool of every industry, such as healthcare, finance, education, and retail. The global AI market surpassed $600 billion in 2025; it is expected to reach $2 trillion by 2030.

Featured Roles

AI/ML Engineer · Prompt Engineer · NLP Specialist · AI Ethics Consultant · LLM Fine-tuning Specialist

Required Skills

Python · PyTorch · TensorFlow · Transformer architectures · RAG systems · MLOps

🏢 Featured Companies – Doors Open for New Graduates

NVIDIA

The undisputed leader in AI chips. Approximately $130 billion in revenue in FY2026 (%114 growth). With Blackwell GPUs, data center revenue reached record levels. Market cap exceeded $3 trillion. The "New College Grad" program is available for new graduates.

OpenAI

With ChatGPT and GPT-4o, 900M+ weekly active users, 50M+ paid subscribers. $20 billion revenue in 2025; generating $2 billion monthly revenue in 2026. Closed a $122 billion funding round in March 2026 at an $852 billion valuation. Actively hiring for research engineer and product roles.

Google DeepMind

With Gemini 3 models, AlphaFold, and Veo video AI, it leads scientific research. Manages AI integration across all of Google's products. Opens doors for new graduates through STEP and SWE internship programs.

Microsoft (Azure AI)

Invested $13 billion in OpenAI. Leads enterprise AI with the Copilot product family. Azure AI revenue is growing annually by 50%+. Recruits university students through the "Explore" and "Garage" programs.

Meta (FAIR)

Pioneering with Llama open-source models and the Fundamental AI Research (FAIR) lab. Annual $65 billion investment in AI infrastructure. Active programs for PhD and new graduate researchers.

Anthropic

Focused on safe AI development with Claude models; received $4 billion investment from Amazon. Growing rapidly among enterprise customers. Looking for researchers and engineers for safe AI research.

Scale AI

Leader in AI data infrastructure and model evaluation. Actively hiring with "Software Engineer - New Grad" positions. Building critical data infrastructure on the path to AGI.

Amazon (AWS AI)

Global leader in enterprise AI infrastructure with AWS Bedrock and SageMaker platforms. Committed to investing $100 billion in AI and cloud services in 2025. Offers comprehensive career opportunities for new graduates through the "Amazon Future Engineer" and "AWS re/Start" programs.

Mistral AI

Europe's pioneer in open-source LLMs; growing with offices in Palo Alto and Paris. Offers a 6-month rotation opportunity for new graduates through the "Future AI Global Leaders" program.

Hugging Face

The center of open-source AI models; hosts 500,000+ models and datasets. A dynamic and international work environment for ML researchers and engineers.

Perplexity AI

AI search engine that combines real-time web search with LLMs. Listed in Forbes Top 50 AI Companies 2026. Looking for engineers and researchers with its rapidly growing team.

Salesforce (Agentforce)

Through the "Builder" program, it will hire 1,000 AI-native graduates in 2026. A leader in enterprise AI agents with the Agentforce platform. Actively hiring in engineering, product, and sales.

Cohere

Pioneer in enterprise LLM and RAG solutions; provides custom AI infrastructure for large companies. Actively hiring engineers and researchers.

xAI (Grok)

Elon Musk's AI company; growing rapidly with Grok models. Looking for research engineers and ML specialists.

Cursor / Anysphere

AI-powered code editor; among the companies with the highest hiring intensity in 2026. A rapidly growing career opportunity for software engineers.

Harvey AI

AI platform specialized for the legal sector; among the fastest-growing AI companies in 2026. Looking for engineers and legal-tech specialists.

SECTOR 2

Sustainability and Green Jobs

The fight against the climate crisis and net zero targets are transforming the business world fundamentally. In 2025, renewable energy supplied 34.3% of global electricity for the first time; solar and wind growth surpassed global demand growth by 109%.

Featured Roles

Sustainability Director (CSO) · Carbon Markets Specialist · Renewable Energy Engineer · ESG Analyst · Green Building Certification Specialist

Required Skills

Environmental regulations · LCA analysis · LEED/BREEAM certifications · Carbon accounting · Energy modeling

🏢 Featured Companies – Doors Open for New Graduates

NextEra Energy

The world's largest wind and solar energy producer. Florida-based with 37,000 MW capacity; 2025 revenue of $24.4 billion, market value of approximately $146 billion. New graduate programs are available in engineering and data analysis.

First Solar

The leading thin-film solar panel manufacturer in the U.S. Rapidly expanding production capacity in the U.S. with IRA incentives. Actively hiring for manufacturing engineers and R&D specialists.

Enphase Energy

Global leader in solar micro-inverters and home energy storage systems. More than 5 million installations across 60+ countries. Hiring software and hardware engineers.

GE Vernova

A giant in wind turbines and energy infrastructure. Became an independent company after separating from GE in 2024. Offers new graduate programs in wind turbine engineering, energy systems, and digital solutions.

Tesla Energy

Leader in grid-scale battery market with Powerwall and Megapack energy storage systems. Megapack revenue hit a record in 2025. Actively hiring energy engineers and software developers.

Nextracker

World leader in solar tracking technology. Fremont, CA-based; accelerating U.S. manufacturing with IRA incentives. Career opportunities for mechatronics and software engineers.

Sunrun

The largest residential solar company in the U.S. Searching for energy consultants and technicians through the "Come Run With Us" program. Working with the mission of making clean energy accessible.

Ørsted

Leader in global offshore wind energy; growing rapidly in the U.S. 56+ open positions in engineering, project management, and environmental sciences. Career opportunities in offshore wind projects.

Vestas

World leader in wind turbine manufacturing; strong growth in North America. Opening doors for new graduates in turbine design, field operations, and data analysis.

Fervo Energy

Pioneer in next-generation geothermal energy; providing Google's data centers with 24/7 carbon-free energy. At the top of TIME's Top GreenTech Companies 2026 list. Hiring engineers and data analysts.

Crusoe Energy

A company powering AI data centers with renewable and waste energy; received a $1.375 billion Series E investment. Actively hiring energy and software engineers.

Form Energy

Pioneer in long-duration energy storage (iron-air battery) technology; backed by Microsoft and other major investors. Hiring materials science and systems engineers.

Brookfield Renewable

Global renewable energy operator with 25 GW+ installed capacity; wind, solar, and hydroelectric. Career opportunities for energy analysts and project managers.

Sungrow

127% annual growth in energy storage systems; global leader in solar inverters and battery storage systems. Actively hiring in engineering and sales.

SECTOR 3

Data Science and Big Data Analytics 📊

Data is now the main raw material of every industry. As of 2025, **2.5 quintillion bytes** of data are generated per day. AI/ML Engineering has overtaken data science to become the most in-demand technical role.

Key Roles

Data Engineer · ML Engineer · Business Intelligence Analyst · Data Architect · Analytics Engineer · AI Product Manager

Required Skills

SQL · Python · dbt · Spark · Tableau/PowerBI · Airflow · Vector databases

🏢 Featured Companies – Opportunities Open for New Graduates

Databricks

Leader in data and AI platforms. More than 60% of Fortune 500 companies are customers; valued at $62 billion in 2025. SQL product reaches $600 million ARR annually (150% growth). Recognized as a Gartner Magic Quadrant leader 5 times. Actively hiring data engineers and ML engineers.

Snowflake

Industry standard in cloud data warehousing. 10,000+ enterprise customers. New graduate programs available for data engineers, solution architects, and product managers.

Palantir

Critical infrastructure in defense, intelligence, and enterprise big data analytics. Rapid growth with AIP (AI Platform); reached GAAP profitability in 2023 and continues to grow. The "Forward Deployed Engineer" program directly places new graduates into customer projects.

Confluent

Real-time data streaming platform based on Apache Kafka. Critical infrastructure in finance, e-commerce, and logistics. Actively hiring data engineers and platform engineers.

dbt Labs

Standard tool in data transformation and analytics engineering. 50,000+ active users. Hiring analytics engineers and developer relations specialists.

Tableau (Salesforce)

World leader in data visualization and business intelligence. Integrated with Salesforce Einstein AI. Career opportunities for business intelligence analysts and solution engineers.

Fivetran

Leader in data integration and ELT (Extract-Load-Transform). A critical component of the modern data stack. Hiring data engineers and customer success specialists.

Monte Carlo

Pioneer in data reliability and data quality monitoring platforms. Fast-growing startup; early-career opportunities for data engineers and product managers.

Starburst (Trino)

Distributed SQL query engine; open-source standard in big data analytics. Actively hiring data architects and platform engineers.

SECTOR 4

Health Technologies and Digital Health 🧬

Post-pandemic, the digitalization of healthcare systems gained momentum. The global digital health market exceeded **$250 billion** in 2025 and is expected to reach **$600 billion** by 2030. AI-powered diagnostics, gene therapy, and personalized medicine are redefining the sector.

Featured Roles

Bioinformatics Specialist · Digital Health Product Manager · Clinical Data Analyst · Healthcare AI Engineer · Medical Device Software Developer

Required Skills

Biotechnology · Genomic data analysis · FDA/EMA regulations · HIPAA compliance · Medical image processing · Python/R

🏢 Featured Companies – Doors Open for New Graduates

Intuitive Surgical

World leader in minimally invasive surgery with the Da Vinci surgical robotic system. 2025 revenue of $8.4 billion (18% growth). 10,000+ Da Vinci systems installed worldwide. Actively hiring software engineers and clinical specialists.

Tempus AI

AI-powered genomics testing and personalized medicine platform for cancer treatment. Included in the TIME100 Most Influential Companies 2026 list. New graduate positions available in bioinformatics and data science.

Moderna

Pioneer of mRNA technology; after the COVID-19 vaccine, it is focusing on oncology, cardiovascular, and rare diseases. Looking for AI engineers with the goal of becoming a "real-time AI organization."

Regeneron

Biotechnology giant that has achieved major success with Dupixent and other biologics. 400+ open positions; career opportunities for research scientists, clinical data analysts, and engineers.

Vertex Pharmaceuticals

A company that revolutionized cystic fibrosis treatment; investing in gene editing and cell therapy. Its science-driven culture offers strong career support for new graduates.

Genentech (Roche)

A 50-year pioneer in biotechnology drug development. Developed the first new stroke drug in 30 years. Researching new antibiotics with the GNEprop deep learning model in collaboration with NVIDIA and Mila.

CRISPR Therapeutics

Created the first approved CRISPR therapy for sickle cell disease (Casgevy) with gene editing technology. Runs 10+ clinical programs in oncology, diabetes, and cardiovascular disease.

Veeva Systems

Cloud-based software platform for pharmaceutical and biotechnology companies. Industry standard in clinical research management and regulatory compliance. Actively hiring software engineers and consultants.

Illumina

Global leader in DNA sequencing technology. Made personalized medicine accessible by dramatically reducing the cost of genomic testing. An ideal starting point for bioinformatics and biomedical engineering graduates.

Schrödinger

Accelerates drug discovery with computational chemistry software; a customer to nearly all major pharmaceutical companies. Hiring software engineers and computational chemists.

Formation Bio

AI-native drug company; backed by a16z and Sequoia. Takes clinical-stage drugs from large pharma and develops them faster with AI. Actively hiring in data science and clinical operations.

Alnylam Pharmaceuticals

World leader in RNA interference (RNAi) therapeutics; among the fastest-growing biotechnology companies in 2025-2026. Looking for researchers and clinical data analysts.

Insmed

Pioneer in rare lung disease treatment; the biotechnology company with the highest growth score in 2025-2026. Looking for clinical research and regulatory affairs specialists.

Recursion Pharmaceuticals

Pioneering company automating drug discovery with AI and robotics; strategic partnership with NVIDIA. Actively hiring bioinformatics and ML engineers.

Exelixis

Oncology-focused biotechnology; strong growth in 2025. Career opportunities in clinical research and drug development.

SECTOR 5

Robotics and Automation 🤖

The global robotics market reached **$28.4 billion** in 2025 (**26%** growth). **7** commercial humanoid robot platforms launched. With NVIDIA's **“physical AI”** vision, robotics is becoming a strategic technology field that scales as fast as software.

Featured Roles

Robotics Engineer · Physical AI Researcher · Automation Architect · Cobot Integration Specialist · Robot Software Developer

Required Skills

ROS (Robot Operating System) · Python/C++ · Computer vision · Mechatronics · NVIDIA Isaac · Simulation tools

🏢 Featured Companies – Doors Open for New Graduates

NVIDIA (Robotics)

With the Isaac GRooT humanoid robot model and the Jetson Thor platform, it is building the infrastructure for robotics AI. More than **2M+** developers, including Boston Dynamics, Figure, and Agility Robotics, use NVIDIA's stack. Actively hiring robotics software engineers.

Boston Dynamics

World leader in autonomous mobility and industrial inspection with Spot and Atlas robots. Serves major companies like BP and National Grid; operates under Hyundai. Hiring mechatronics and software engineers.

Figure AI

The fastest-growing startup developing humanoid robots. Reached a **$39 billion** valuation in 2026 and is actively in use at BMW's Spartanburg factory. Career opportunities for robotics engineers and AI researchers.

Agility Robotics

Its humanoid robot Digit is actively used in Amazon warehouses. Surpassed the milestone of moving **100,000 totes** with GXO. Hiring mechatronics, software, and operations engineers.

Symbotic

The fastest-growing company in warehouse automation. Approximately **$1.8 billion revenue in 2025**; serves Walmart and other major retailers. Actively hiring automation engineers and software developers.

Apptronik

A humanoid robot startup; received **$520 million** in investment from Google and Mercedes-Benz (February 2026). Partnered with Toyota on the RAV4 production line. A fast-growing career opportunity for robotics engineers.

Amazon Robotics

Amazon's logistics and warehouse automation arm. Deployed **750,000+** robots worldwide. Large-scale hiring for robotics engineers, software developers, and operations specialists.

Intuitive Surgical

A sector giant in surgical robotics with **$8.4 billion** revenue from the Da Vinci system. **10,000+** systems installed worldwide. Career opportunities for biomedical and software engineers.

Rockwell Automation

Global leader in industrial automation and smart manufacturing. Approximately **$9 billion revenue in 2025**. Hiring automation engineers and system integrators for Industry 4.0 solutions.

Physical Intelligence (π)

Developing a general-purpose robot brain; reached a **$2.8 billion** valuation in its first year. Fast-growing career opportunities for robotics AI researchers and engineers.

Skild AI

Closed the largest funding round in robotics history with a **$1.4 billion** Series C in early 2026. Developing AI models that run across different robot platforms.

Collaborative Robotics (Cobot)

AI-native cobot for cage-free human-robot collaboration; backed by General Catalyst and Sequoia, with **$140 million** raised. Actively hiring in flexible manufacturing and logistics.

ABB Robotics

$2.3 billion in industrial robotics revenue; in the process of being sold to SoftBank. A global leader with **140+** years of industrial automation experience. Career opportunities in engineering and systems integration.

SECTOR 6

Cybersecurity

🔒

In 2025, the global cost of cyberattacks exceeded **10 trillion dollars**. The cybersecurity market is expected to grow by **12.45%** annually between **2025–2030**. Today, every organization is making security professionals a **strategic priority**.

Featured Roles

Cybersecurity Analyst · Penetration Tester (Pentester) · Security Architect · SOC Analyst · Cloud Security Engineer · Threat Intelligence Specialist

Required Skills

Network security · Zero Trust architecture · SIEM tools · Ethical hacking · Cloud security (AWS/Azure/GCP) · CISSP/CEH certifications

🏢 Featured Companies – Doors Open for New Graduates

CrowdStrike

Global leader in AI-powered endpoint security with the Falcon platform. Regained growth momentum after the July 2024 outage. Actively seeking new graduate security analysts through its **"University Hire"** program.

Palo Alto Networks

Comprehensive platform for network security, cloud security, and SIEM. Aiming for a top-3 position in the SIEM market with the IBM QRadar SaaS acquisition. Market cap of **~137 billion dollars**. Internship and new graduate programs are active.

Zscaler

Pioneer in Zero Trust architecture for enterprise and government network security. In active growth with **1,200+** open positions. An ideal starting point for cloud security engineers.

SentinelOne

Autonomous AI-based threat detection and response platform. Offers natural-language security investigations with **Purple AI**. Growing rapidly with **835+** open positions.

Wiz

Acquired by Google for **32 billion dollars**, and the acquisition was completed in March 2026 – Google's largest acquisition ever. Now operating within Google Cloud, it offers career opportunities in multi-cloud security platforms.

Okta

World leader in identity and access management (IAM). Customer of **two-thirds of the Fortune 100**. **1,130+** open positions; social-impact-oriented career opportunities through the **"Okta for Good"** program.

Cloudflare

Global infrastructure provider in internet security and performance. **565+** open positions; seeking experts in network security, DDoS protection, and Zero Trust.

Darktrace

Pioneering British company in AI-based cybersecurity; growing rapidly in the U.S. Offers a structured career start for new graduates through the **"Sales Development Academy"**.

Abnormal Security

Fast-growing startup in email security and AI-based threat detection. **423+** open positions; actively hiring SOC analysts and security engineers.

Fortinet

Global leader in network security and SD-WAN; 2025 revenue exceeded **6 billion dollars**. Actively hiring security engineers and product managers.

CyberArk

World leader in identity security and privileged access management (PAM). Customer of the vast majority of the Fortune 500. Seeking security analysts and engineers.

Cisco (Security)

Expanding its security portfolio with Talos threat intelligence and Duo authentication. One of the industry's largest players with annual revenue of **51 billion dollars**. Internship and new graduate programs are active.

Tenable

Leader in vulnerability management and exposure management. Industry standard with Nessus. Career opportunities for security analysts and engineers.

Rapid7

Pioneer in threat detection, vulnerability management, and MDR services. Strong position in enterprise security with the InsightVM and InsightIDR platforms. SOC analyst positions are available for new graduates.

TENEX.AI

AI-native SOC company; received **250 million dollars** in Series B funding in March 2026. Ranked as the fastest-growing cybersecurity company. Seeking security engineers and AI specialists.

SECTION 2

Target Sectors for Success in the U.S.

The areas with the highest growth potential and career opportunities in the United States.

Areas Where the U.S. Is Strong: Technology and Innovation

The U.S. alone attracts approximately 35% of global technology investments. As of 2025, 8 of the world's 10 most valuable companies are American technology companies. Silicon Valley, Boston, Seattle, Austin, and New York each offer ecosystems specialized in different sectors. The U.S.'s greatest advantage is not just capital; it is the combination of world-class research universities such as Stanford, MIT, Harvard, and Caltech, a deep talent pool, and an entrepreneurial culture open to risk-taking. This combination enables new technologies to move from the laboratory to the market very quickly and creates unique opportunities on a global scale for both product development and careers.

🏙️ Silicon Valley (Bay Area)

The world's densest technology ecosystem. Google, Apple, Meta, NVIDIA, OpenAI, and Anthropic are located here. The median software engineer salary is in the $180,000-$250,000 range. 40% of venture capital investments flow into this region, creating a continuous innovation cycle in both early-stage startups and large-scale product development.

🔬 Boston / Cambridge

One of the world's largest biotechnology clusters. More than 1,000 biotechnology companies operate around Harvard and MIT. The region, which ranks number 1 in the U.S. for NIH funding, continues its global leadership in drug development, gene therapies, medical devices, and health technologies. Kendall Square is often referred to as "the most innovative square mile in the world."

☁️ Seattle

Home to Amazon (AWS) and Microsoft, Seattle offers strong expertise in cloud computing, e-commerce, and aviation. Boeing's presence also deepens the manufacturing and engineering culture. High salary levels for software engineers, a strong corporate R&D environment, and the advantage of no state income tax make this a very attractive career destination.

🤠 Austin, Texas

Known as "Silicon Hills," Austin is one of the fastest-growing technology hubs in recent years. Tesla, Apple, Google, and Oracle have opened offices here, increasing the region's pull. The cost of living is about half that of Silicon Valley; additionally, the absence of state income tax offers a significant advantage, especially for entrepreneurs and high-income professionals.

🗽 New York City

The intersection of fintech, media technology, and e-commerce. In this city, where Wall Street meets technology, AI investments from companies like JPMorgan, Goldman Sachs, and Bloomberg are concentrated. For financial data, ad tech, content platforms, and enterprise AI solutions, New York brings technology and business onto the same ground.

Artificial Intelligence and Data Science: The Golden Age in the U.S.

The U.S. produces 40% of global AI research publications and is the world leader in AI patent applications. As of 2025, investment in AI companies in the U.S. has exceeded $100 billion. This scale shows not only capital abundance; it also reflects the strong interaction between universities, labs, venture capital, and major technology companies. The average annual salary of an AI Engineer in the U.S. ranges between $180,000 and $300,000; at senior positions, this figure can reach much higher levels with stock options. Demand is so high that companies are actively hiring talent from abroad, offering visa sponsorship, and rapidly expanding teams especially in machine learning, data science, LLM infrastructure, and productization.

The AI Race of Tech Giants

Google invests $75 billion annually, Microsoft $80 billion, and Meta $65 billion in AI infrastructure (2025 figures). Amazon AWS is growing AI services revenue by more than 50% annually. These giants are constantly looking for AI Engineers, ML Researchers, Data Scientists, and AI Product Managers. Their R&D spending per employee is at 10 times the level of the rest of the industry; this creates a unique scale in new model development, data infrastructure, distributed systems, and productionization processes.

Startup Ecosystem and Early Career Opportunities

In the U.S., more than 1,000 AI-focused startups are founded every year. Y Combinator, Andreessen Horowitz, and Sequoia Capital pour billions of dollars into these ventures. For early employees, stock options offer major wealth opportunities, while smaller teams provide broader responsibility and much faster learning in product, research, and engineering. Companies such as Anthropic, Mistral, Cohere, and Scale AI are opening rapidly growing career paths; especially in model training, data labeling infrastructure, safe AI, and enterprise AI solutions, there is serious demand.

Salary and Career Growth

According to LinkedIn and Levels.fyi data, a Junior AI Engineer can earn $130,000-$160,000, Mid-level $180,000-$230,000, Senior $250,000-$350,000, and Staff/Principal $400,000+ per year. Total compensation; when salary, equity, and bonus are combined, can exceed $500,000 at large companies. With 3-5 years of experience, career progression is extremely fast; with the right technical depth, publications, open-source contributions, and production experience, it is possible to move into senior roles in a very short time.

Biotechnology and Health Technologies: Medicine's Future

The U.S. accounts for 45% of global biotechnology R&D spending. The FDA approves a record number of new drugs and medical devices every year; in 2024, more than 50 new molecular drugs were approved. The Boston-Cambridge region alone is home to more than 1,000 biotechnology companies and receives $5.2 billion in annual funding from the NIH. CRISPR gene editing, mRNA technology, and AI-powered drug discovery are transforming medicine from the ground up. Professionals working in this field find both high salaries and the opportunity to contribute to humanity.

Bioinformatics Specialist

Analyzes the human genome to predict disease risks and develops personalized treatment protocols. Requires expertise in Python, R, and genomic databases (NCBI, Ensembl). Average salary: $110,000-160,000.

Clinical Data Analyst

Analyzes clinical trial data for pharmaceutical companies and supports FDA approval processes. Knowledge of SAS, R, and clinical data management systems (Medidata, Veeva) is critical. Average salary: $90,000-130,000.

Healthcare AI Engineer

Develops AI models that diagnose diseases from medical images (MRI, CT). Google Health, Microsoft Healthcare, and startups are actively hiring in this area. Average salary: $150,000-220,000.

Medical Device Software Engineer

Develops software in compliance with the FDA's 510(k) and PMA processes. Medtronic, Abbott, and Boston Scientific are constantly hiring. Average salary: $120,000-180,000.

Regulatory Affairs Specialist

Manages communication between pharmaceutical and device companies and the FDA/EMA. A background in law, biology, or pharmacy is required. Average salary: $100,000-150,000.

Renewable Energy and Sustainability: The Green Revolution

The U.S. is providing approximately $369 billion in incentives for clean energy technologies through the Inflation Reduction Act (IRA). As of 2025, solar and wind energy account for 25% of U.S. electricity generation. The clean energy sector is growing 3 times faster than the fossil fuel sector and is expected to create 1 million new jobs by 2030. Due to corporate sustainability (ESG) pressure, 90% of Fortune 500 companies now employ a sustainability director (CSO). Carbon markets, green hydrogen, and smart grid technologies are opening up new career areas.

☀️ Solar & Wind Energy

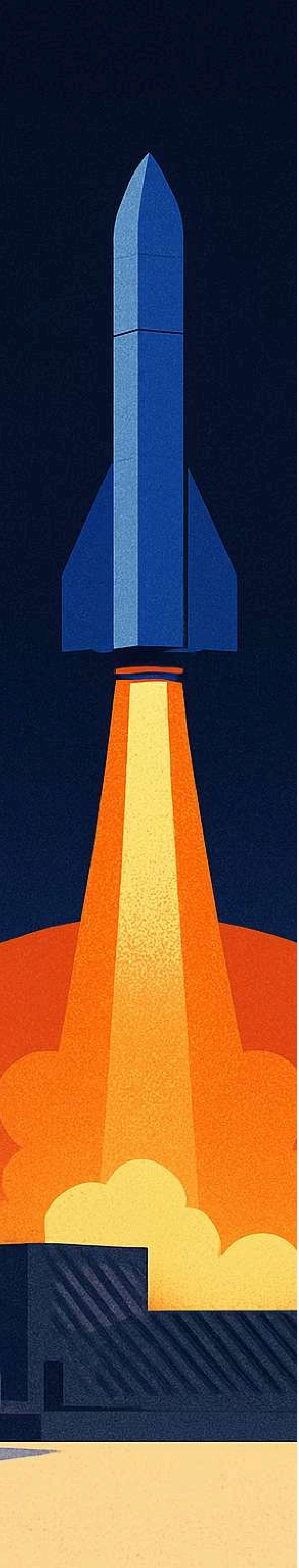
In the U.S., installed solar capacity exceeded 200 GW in 2025. In wind energy, it holds the position of world number two with 150 GW+ capacity. Solar panel installation costs have fallen 90% over the last 10 years. Renewable Energy Engineer, Solar System Designer, and Wind Turbine Technician roles are among the fastest-growing positions. Average salary: $80,000 - $130,000.

🌿 ESG and Corporate Sustainability

The climate risk disclosure rules approved by the SEC in 2024 were dropped by the new administration in March 2025. However, CSRD (Corporate Sustainability Reporting Directive) remains in force in Europe; global companies continue ESG reporting. In this uncertain environment, demand for ESG specialists continues. Experts in carbon footprint accounting, supply chain sustainability, and green finance are in high demand. Average salary: $100,000 - $180,000.

⚡ Clean Technology and Energy Storage

Battery technology (especially lithium-ion and solid-state), green hydrogen production, and smart grid management are critical components of the clean energy transition. Tesla Energy, Fluence and Form Energy are leading in this area. Demand for Energy Storage Engineer and Smart Grid Specialist roles is expected to increase by 40% between 2025-2030.



Space Technologies and Aviation: New Frontiers 🚀

The global space economy reached $626 billion in 2025; it is expected to exceed $1 trillion between 2032-2034. In 2025, a record 321 orbital launches took place. The private sector now accounts for 78% of the space economy.

Featured Roles

Space Systems Engineer · Satellite Data Analyst · Aerospace Software Engineer · Propulsion Engineer · Space Law Specialist

Required Skills

Aerospace engineering · Orbital mechanics · Embedded systems · RF communications · Remote sensing · Python/MATLAB

🏢 Featured Companies – Doors Open for New Graduates

SpaceX

In 2025, revenue was $15-16 billion; Starlink alone generates $10 billion and has 9.2 million subscribers. In April 2026, an IPO filing was opened with a target valuation of $1.75 trillion – expected to be the largest public offering in history. Actively hiring aerospace and software engineers.

Blue Origin

The New Glenn rocket achieved its first orbital success in 2025. Jeff Bezos's space company; developing a lander for NASA's Artemis moon program. Looking for propulsion and systems engineers.

Rocket Lab

In 2025, revenue was $602 million (38% growth). A $1.85 billion order backlog. Successfully launched NASA's Mars mission (ESCAPADE). Opening doors for new graduates in small satellite and launch systems.

Planet Labs

Daily Earth imaging with a constellation of 200+ satellites. A critical data provider for agriculture, defense, and climate monitoring. Hiring satellite data analysts and software engineers.

Maxar Technologies

High-resolution satellite imaging and geospatial intelligence. A critical supplier to the U.S. government and defense sector. Looking for remote sensing and geographic information systems specialists.

Relativity Space

Redefining rocket manufacturing with 3D printing technology. Developing the Terran R reusable rocket. Innovative career opportunities for materials science and manufacturing engineers.

Northrop Grumman

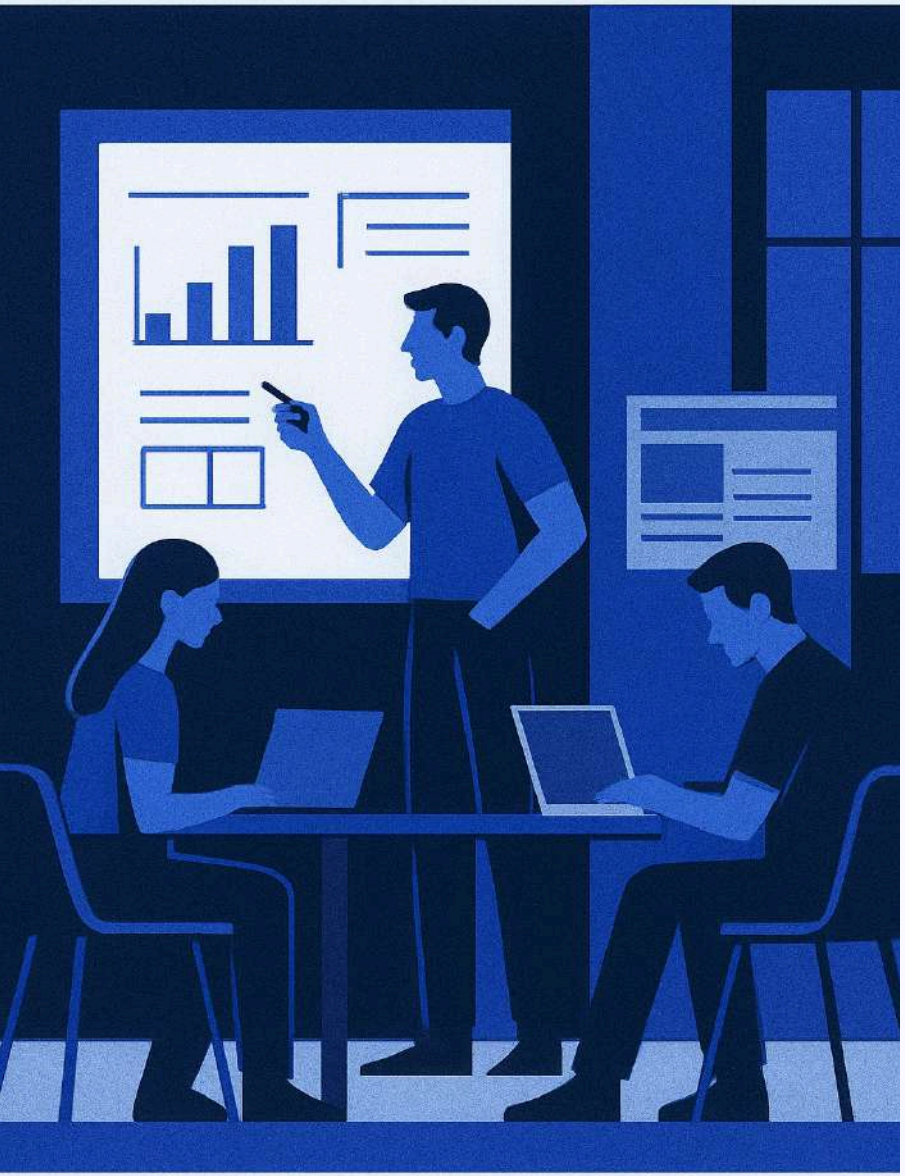
One of the largest companies in the U.S. in defense and space systems. Producer of the James Webb Space Telescope. Comprehensive career programs for aerospace engineers and systems integrators.

Lockheed Martin

A giant in the defense industry with the F-35 and space systems. Developing NASA's Orion capsule. The "LM Early Career" program is available for engineering and software new graduates.

L3Harris Technologies

A leader in satellite communications, electronic warfare, and defense electronics. Hiring engineers and data analysts in space and aerospace systems.



SECTION 3

Roadmap for White-Collar Workers and University Students

The right skills, the right steps, and the right network – a preparation guide for the future.

Which Competencies Should We Invest In?

According to the World Economic Forum's 2025 *Future of Jobs Report*, 44% of employers expect their workers' core skills to change dramatically by 2030. Technical skills alone are not enough; the most successful professionals blend technical depth with human skills. To stand out in the future of work, not only what you know, but also **how you learn**, **how you think**, and **how you collaborate** will be decisive. Here are the most valuable competency categories of the future:

Technical Skills

Core programming languages such as Python, R, and SQL form the backbone of data extraction, cleaning, transformation, and analysis processes. In addition, machine learning libraries such as TensorFlow, PyTorch, and Scikit-learn advance classification, prediction, and modeling capabilities. Cloud platforms like AWS, Azure, and GCP make it possible to build scalable infrastructure and manage data workflows. Docker, Kubernetes, and CI/CD tools provide speed and reliability in development, testing, and deployment processes. On the cybersecurity side, fundamentals such as network security, authentication, access control, and encryption become critical, especially in roles that work with sensitive data. You do not need to have all of these skills; prioritizing them according to your industry, role, and career goals is much more strategic.

Analytical and Critical Thinking

Being able to draw meaningful insights from complex data sets is not just about reading numbers, but about seeing the behavior behind the data and the business outcome. Strong analytical thinking includes formulating hypotheses, testing them, interpreting results, and redesigning the approach when necessary. Turning business problems into technical solutions requires asking the right question–what problem are we solving?–before asking which tool to use. Being able to make decisions under uncertainty, to orient yourself even with incomplete information, and to weigh risks wisely are important parts of this competency. As AI tools speed up data processing, human value becomes even more visible in interpretation, context-building, and asking the right question.

Continuous Learning and Adaptation

Platforms like Coursera, edX, Udemy, and fast.ai offer powerful resources for learning new skills in a structured way. But learning is not limited to courses: following academic papers via arXiv and Google Scholar helps you understand current discussions and research directions in your field. Contributing to open-source projects on GitHub gives you hands-on experience with real-world, production-quality work. Conferences, meetups, and hackathons are also valuable for both learning fast-changing tools and expanding your professional network. Technology evolves so quickly that a method you learned three years ago may no longer be sufficient on its own today; that is why learning should be seen not as a seasonal task, but as a permanent habit of your career.

Communication and Collaboration

Being able to explain technical topics to non-technical stakeholders in a simple, clear, and reassuring way demonstrates the value of an idea not only through its correctness, but also through its clarity. Working with multicultural and remote teams requires adapting to time zone differences, different ways of working, and communication styles. Presentation, written communication, and documentation skills help ensure that information flow remains sustainable, especially in scaling organizations. Understanding project management approaches like Agile and Scrum provides an advantage in terms of team transparency, rhythm, and prioritization. In U.S. work culture, "soft skills" are often as decisive as technical skills; a significant portion of hiring decisions are shaped by how a candidate works within a team and how they express themselves.

Global and Cultural Intelligence

Being able to work effectively with colleagues from different cultures is not only a matter of courtesy, but also a competency that directly affects business outcomes. In American work culture, communicating directly, using networking naturally as a professional tool, and making your contribution visible can make a major difference in career growth. Being able to use English as a second language at a business level, speaking comfortably in meetings, ensuring clarity in emails and reports, and accessing international information sources are critically important. A global perspective offers a significant advantage, especially in companies working with international customers, participating in multinational teams, or expanding into different markets. Cultural intelligence makes it possible to understand different perspectives and turn them into a shared goal.

Entrepreneurial Mindset

Seeing problems not as obstacles but as solvable opportunities helps you develop a more proactive and creative stance in your career. The minimum viable product (MVP) approach teaches you to test an idea quickly and improve it with feedback instead of trying to perfect it for a long time. Risk tolerance is the ability to take calculated steps instead of completely pulling back in the face of uncertainty; learning from failure is an essential part of this mindset. Understanding startup culture makes it easier to think with a focus on speed, experimentation, and customer feedback. Intrapreneurship, which is increasingly important even in large companies, gives employees room to develop new products, processes, and business models within the organization. For this reason, an entrepreneurial mindset is a strategic advantage not only for those who want to found a company, but for professionals who want to make a difference in every role.

Steps for Career Change or Starting Out

You no longer need a computer science degree to transition into the technology sector. Bootcamp graduates, self-taught learners, and people from different disciplines are changing careers successfully. However, without a structured plan, this transition can take much longer and be more difficult. Here is a proven 4-step roadmap:

These four steps form the core action plan that accelerates a career transition or entry into a first job. Each step builds on the previous one.

Step 1 – Education

Choose your learning path according to your target sector. For software and artificial intelligence, Google or DeepLearning.AI certificate programs on Coursera, fast.ai's free deep learning course, and foundational computer science courses like CS50 provide a strong starting point. If you're moving into biotechnology, MIT biology courses on edX and Johns Hopkins genomics programs on Coursera can quickly strengthen your sector-specific foundation. In cybersecurity, CompTIA Security+ prep courses plus hands-on platforms like TryHackMe and HackTheBox develop both theory and practice together. With 2-3 hours of regular study per day, it is possible to reach a basic skill level in 6-12 months; the important thing is to choose a clear focus area instead of spreading yourself too thin. At this stage, the goal is not just to collect knowledge, but to build a deliberate learning plan for skills that are in demand in the job market.

A good education plan should follow an order that moves from core concepts to project creation rather than consuming topics randomly. First learn the terminology of the field, then the tools used, and then real work scenarios for more lasting results. For example, in software, algorithmic thinking, data structures, and basic Python flow; in AI, model evaluation, data preparation, and error analysis; in biotechnology, laboratory processes, data interpretation, and academic reading skills can be prioritized. In this way, every new topic you learn turns into a concrete output you can use in the next step.

Step 2 – Certification

The right certifications for your sector make a significant difference in the hiring process. In technology, certifications such as AWS Certified Solutions Architect, Google Professional Data Engineer, and Microsoft Azure AI Engineer show that you are competent in cloud and data infrastructure. In cybersecurity, certificates like CompTIA Security+, CISSP, and CEH demonstrate your command of security fundamentals and professional standards. For data-driven roles, certifications such as Databricks Certified Associate and dbt Analytics Engineer support the ability to work in modern data stacks. In green energy, certifications like LEED AP and NABCEP provide credibility in growing areas such as sustainability and solar energy. Certifications produce not only knowledge, but also a trust signal that recruiters can quickly read.

Especially when changing careers, certification can increase your chances of passing the first filters of a resume screen. When these credentials are visible on your LinkedIn profile, both your keyword visibility increases and the message is sent that you are taking the field change seriously. However, a certificate alone is not enough; it must be supported by real project, application, and problem-solving experience. The best result is to use certification as a milestone that confirms the knowledge gained during the education phase and complete it with portfolio work.

Step 3 – Portfolio

Employers want to see what you can do, not just see a diploma. That is why creating 3-5 real projects on GitHub is a critical step in career transition. Participating in Kaggle competitions and sharing your results makes your data analysis and model development skills visible. By writing your own blog posts or Medium articles, you can show your way of thinking, communication style, and technical knowledge to a wider audience. Contributing to open source projects proves your discipline in working at production quality within a team. Freelance projects or internships, meanwhile, let you experience real customer expectations, deadlines, and feedback loops. A strong portfolio turns the claims on your resume into concrete evidence.

When building your portfolio, it is very valuable to prepare projects that explain not only the outcome but also the process. A project page should clearly include the problem definition, tools used, challenges encountered, decisions made, and the business impact of the result. GitHub repositories should include clean documentation, readable code, and reproducible steps. If you are moving into a data-focused field, your notebooks should be commented and understandable; on the software side, producing small but working products will be more effective. Your portfolio gives you the opportunity to say, rather than “I only learned it,” “I applied it, tested it, and improved it.”

Step 4 – Networking

In the U.S., 70-80% of jobs are filled not through official job postings, but through network connections. That is why using LinkedIn actively, sending personalized messages to people working at target companies, and creating a visible professional profile are extremely important. Attending local tech events on Meetup.com helps you build natural connections with people from inside the industry. Conferences such as NeurIPS, RSA Conference, and BIO International are powerful spaces not only for learning, but also for understanding job opportunities and industry trends. Using your alumni network increases the likelihood of getting referrals or recommendations from people who know and trust you. Aiming to make at least 5 new connections per week helps you build a strong relationship network over time.

Networking is not about collecting business cards; it is about building long-term relationships based on mutual value. In your messages, avoid directly asking for a job and instead take a short, personal approach that shows respect for the other person's experience. At events, do not just introduce yourself; follow up afterward with a message to keep the connection warm. Posts, comments, small offers of help, and sharing industry insights can gradually make you a candidate people remember. Especially when changing careers, even a small contact made with the right person at the right time can significantly change the direction of your application process.

Tips for Success in the USA

Entering the U.S. job market can be highly rewarding when prepared correctly. However, cultural differences, visa processes, and a competitive environment can make it difficult for those who come unprepared. Here are the critical success factors for those who want to build a career in the USA:

🗣️ English Language Skills

Technical English is not enough; business English is a separate skill. Being able to present, negotiate, write emails, and actively participate in meetings is critical. IELTS/TOEFL scores are required for the visa; however, what matters in business life is fluency and confidence. Joining Toastmasters clubs, listening to podcasts, and getting used to thinking in English are accelerating methods.

🤝 Understanding American Work Culture

U.S. work culture rewards direct communication, personal initiative, and "self-promotion." Networking is a necessity, not a social activity. Staying silent in meetings can be perceived as passivity; share your ideas openly. A "can-do attitude" and solution-oriented mindset are always appreciated.

📋 Visa Strategy

The H-1B visa is distributed through the April lottery system with an annual quota of 85,000. The O-1 visa is for people with "extraordinary ability"; academic publications, awards, or media visibility are required. EB-1/EB-2 green cards can be a long-term goal. The L-1 visa is an important option for transfers within multinational companies. Early consultation with an immigration lawyer is critical; the processes are complex and mistakes are costly.

💰 Salary Negotiation

Salary negotiation is a expected norm in the USA. Do not say "yes" to the first offer right away; be sure to research through Levels.fyi, Glassdoor, and LinkedIn Salary. Evaluate the total compensation package: base salary + equity (RSU/stock options) + bonus + health insurance + retirement (401k). Asking for a 10-20% annual increase is reasonable; changing jobs usually brings a 20-40% increase.

🔍 Job Search Strategy

LinkedIn, Indeed, and Glassdoor are the main platforms. Follow company career pages directly. Create a target company list (20-30 companies) and research each one. Applying with a referral can be 5 times more effective than a cold application. Customize the cover letter for each position; generic templates often do not work.

🏠 Practical Preparation

Before moving to the USA, plan for SSN application, building credit history, opening a bank account, and researching health insurance. Starting to build credit history with a secured credit card, simplifying account processes with solutions like Wise or Mercury, and reviewing insurance options in advance provide important advantages. The first 6 months can be the most difficult period; having a financial buffer that covers at least 3-6 months of expenses provides peace of mind.

The Future Is in Your Hands!

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Focusing on the sectors of the future, gaining the right skills, and taking strategic steps – these are the three keys that will unlock a bright career in the U.S.

🎯 Choose the Right Sector

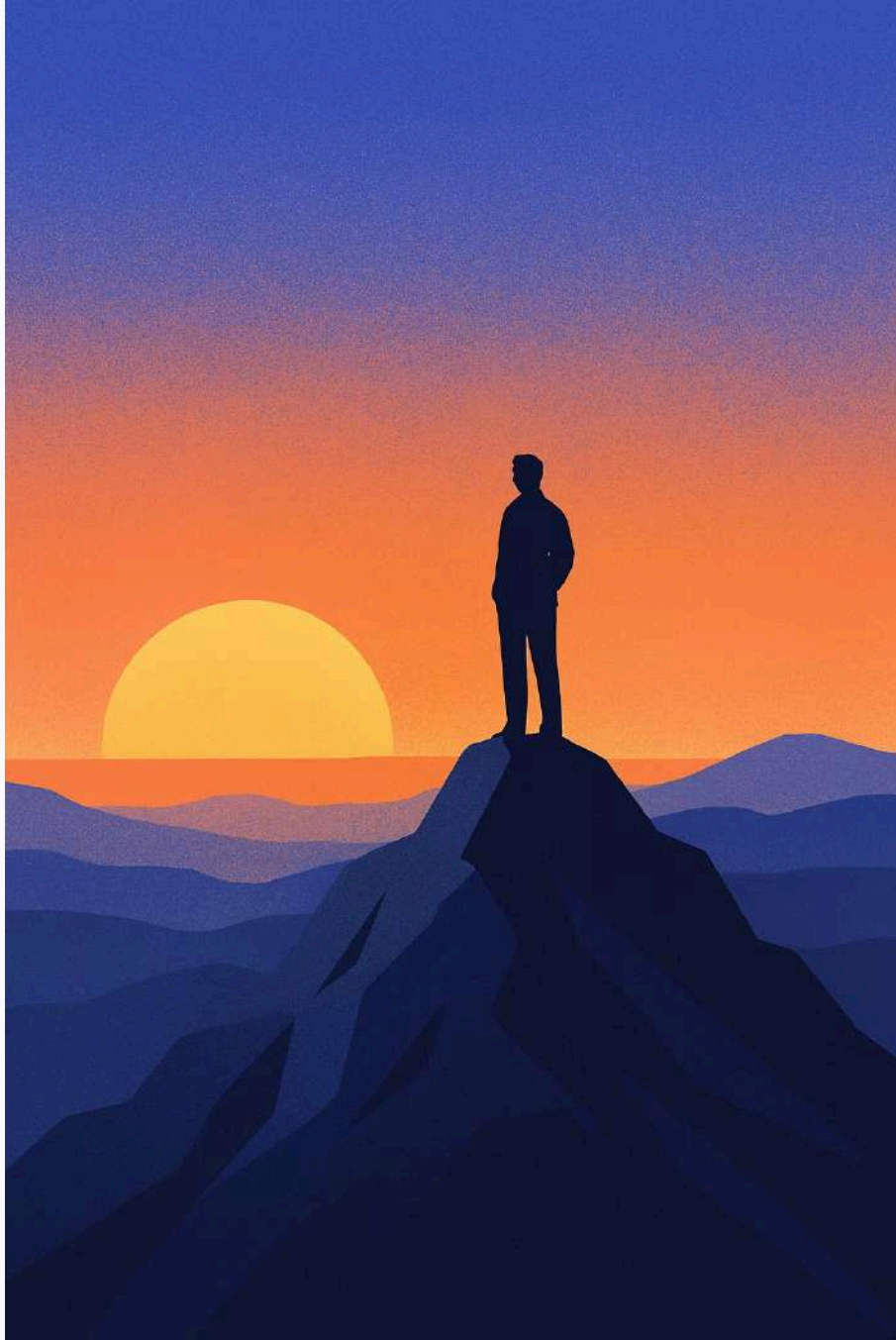
AI, Green Energy, Biotechnology, Cyber Security

📚 Develop Your Skills

Technical + soft skills + continuous learning

🚀 Take Action

Be open to change, learn, and chase your dream



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