



# The Future of Work and Artificial Intelligence

## Professions That Will Survive and Rise in the AI Transformation

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# Chapter 1

## The Business World and Opportunities Shaped by Artificial Intelligence



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Artificial Intelligence (AI) is not a newly discovered technology. Its history dates back to the 1960s. However, there were periods of stagnation in its development. These periods, known as **AI Winters**, were times when AI research slowed due to a lack of data and funding.

Today, the situation is different. Data scarcity is no longer an issue. Big data and strong infrastructures have become the building blocks of AI development. However, there is still much work to be done to take this technology to the next level.

AI is not just a technological innovation; it is a transformation tool that makes data meaningful, organizes it, and applies it in the real world. Data science and machine learning stand out as the fundamental pillars of AI, and professionals specializing in these fields will be among the most sought-after talents in the future. Moreover, the demand for technical roles such as the design, development, and management of autonomous vehicles and smart devices is rapidly increasing.

Additionally, the protection of AI-based systems and ensuring their security against cyberattacks has become one of today's most critical needs. Therefore, cybersecurity experts play a strategic role in ensuring the safe use of AI at both individual and corporate levels.

In today's world, the success of AI projects depends not only on technical expertise but also on a strategic approach. Companies need roles like AI transformation leaders, project managers, and risk experts to manage this transformation.

AI also holds significant potential in the energy sector. As technology advances, the growing demand for energy has increased interest in renewable energy solutions and smart grid management, strengthening career opportunities in these areas.

In summary, AI's impact can be seen in many fields, from data science to the energy sector, from software development to robotic engineering. AI is not just a technology; it is a force reshaping every area of business. So, what professions will work directly with artificial intelligence?





# Chapter 2

## Executive Positions in AI Integration



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## Senior Management



### **Chief Executive Officer (CEO):**

The CEO integrates artificial intelligence (AI) into the company's long-term strategic goals, focusing on optimizing business models and accelerating growth. By overseeing the budget and resources allocated for AI projects, the CEO ensures that innovation and transformation are sustainable. CEOs lead efforts to increase AI awareness across the company and ensure employees embrace the technology. They must be familiar with technology, understand risks, and remain committed to driving progress.

### **Chief Technology Officer (CTO):**

The CTO is the leader who directs the company's technological strategies and decides how technology will be used to develop innovative solutions. The CTO creates and continuously updates the technical infrastructure required for the development and implementation of AI solutions. They explore innovative applications of AI and develop strategies for the company while managing the integration of AI technologies into existing systems and optimizing their performance.



### **Chief Information Officer (CIO):**

The CIO ensures that the data required for AI applications is correctly collected, stored, and analyzed. Machine learning systems and data mining systems require complex storage, network, and computing infrastructures, making the CIO's role critical in many organizations. The CIO uses AI to accelerate digitalization in business processes and leads employees in adapting to this change. They also enhance the security of AI-based systems to protect the company from data breaches and cyber threats.

### **Chief Data Officer (CDO):**

The CDO creates data strategies to support the use of AI within the organization and ensures the implementation of these strategies across the company. The CDO guarantees the consistency, quality, and accuracy of data to improve the accuracy of AI models. They meticulously oversee AI projects to ensure compliance with data privacy laws and regulations. Additionally, the CDO fosters a data-driven organizational culture and leads the transformation of the organization into a data-centric structure.

### **Chief Artificial Intelligence Officer (CAIO):**

The CAIO develops a strategic vision for how Artificial Intelligence will be applied across all company units and oversees its implementation. They initiate, monitor, and assess the impact of AI projects on business outcomes. The CAIO works on developing expert teams in AI and improving organizational capabilities in AI.





# AI Transformation and Strategy Unit



## **AI Transformation Leader:**

Evaluates the AI maturity levels of organizations and plans transformation strategies. Integrates AI strategies into corporate culture and facilitates technology adoption.

## **AI Change Management Consultant:**

Manages challenges faced by organizations during their AI transformation journey. Supports employees in adapting to AI applications, ensuring an effective change management process.

## **AI Business Consultant:**

Analyzes how organizations can benefit from AI technologies and recommends AI solutions tailored to business processes. Develops strategies aligned with organizational goals to guide and optimize transformation processes.

## **AI Governance Lead:**

Develops strategies to ensure AI projects comply with ethical, security, and regulatory frameworks. Enhances the sustainability and transparency of AI projects while minimizing risks and ensuring regulatory compliance.

# Product and Project Management Units



## **AI Product Engineer:**

Responsible for designing, developing, and managing AI-focused products. Ensures products are optimized to meet customer needs.

## **AI Project Manager:**

Oversees AI projects to ensure they are completed on time and within budget. Coordinates teams, manages risks, and optimizes workflows for project success.

## **AI Strategy Officer:**

Defines the organization's AI strategies, develops projects aligned with long-term goals, and ensures resources are utilized effectively.

## **AI Ecosystem Manager:**

Builds and manages collaborations with external stakeholders (technology providers, universities, startups) to support the organization's AI projects.





## Finance Unit



### **AI Financial Analyst:**

Analyzes large datasets using AI tools, evaluates the financial health of organizations, and provides insights on investment opportunities. Uses machine learning algorithms to make forecasts and predict financial risks.

### **AI Financial Data Scientist:**

Leverages machine learning and big data techniques to derive valuable insights from financial data. Develops AI models to predict credit, investment, and market trends.

### **AI Financial Operations Manager:**

Oversees the integration of AI systems into financial operations. Manages AI-driven applications to enhance the efficiency and accuracy of budgeting, accounting, and financial analysis.

### **AI Blockchain Specialist:**

Integrates AI and blockchain technologies in the finance sector. Develops AI-powered solutions to improve data accuracy, security, and transaction speed in blockchain networks.

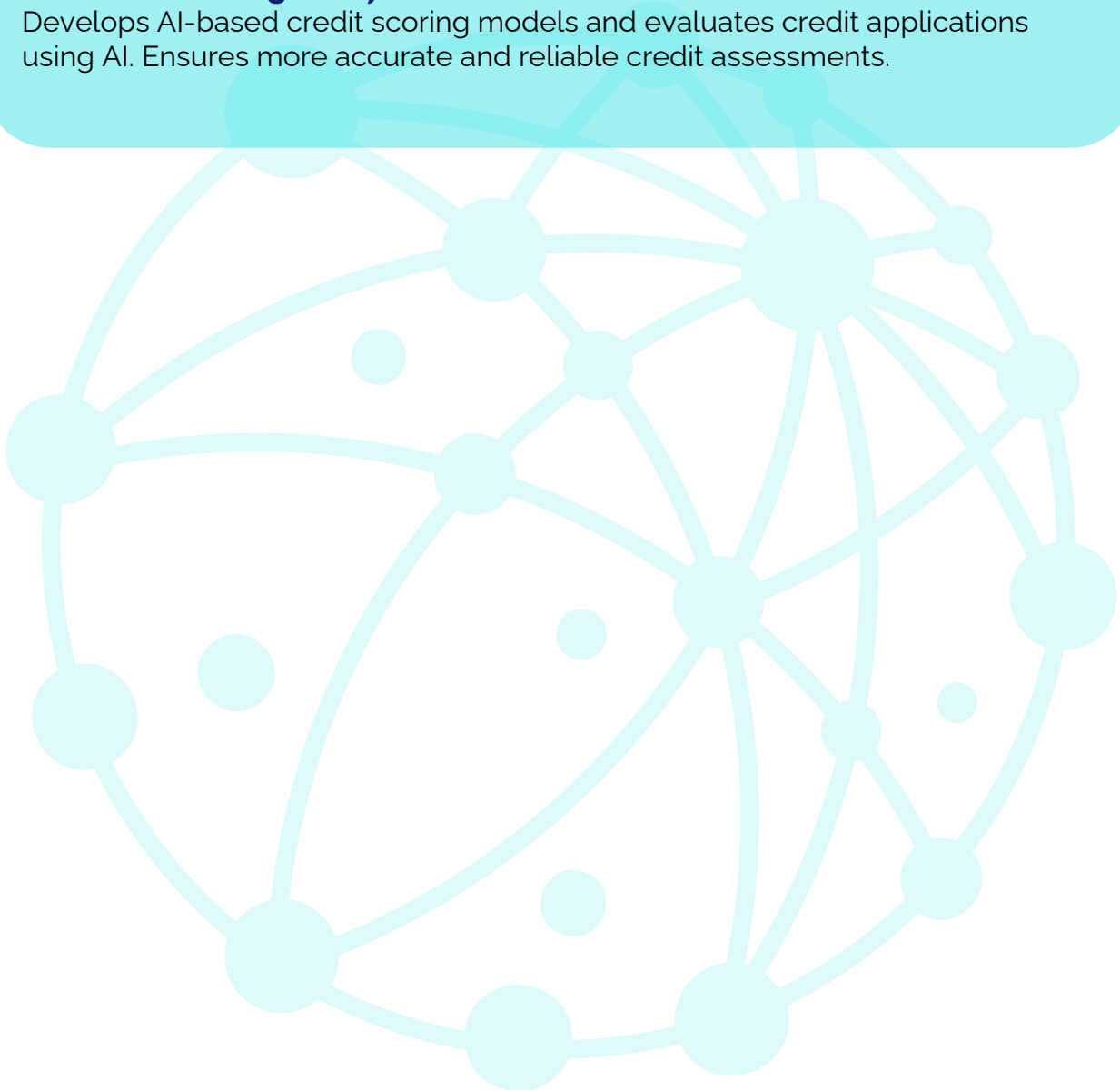


### **AI Financial Decision Support Systems (DSS) Designer:**

Designs and develops financial decision support systems (DSS). These systems provide AI-powered tools to assist investors, financial managers, and decision-makers in making informed decisions.

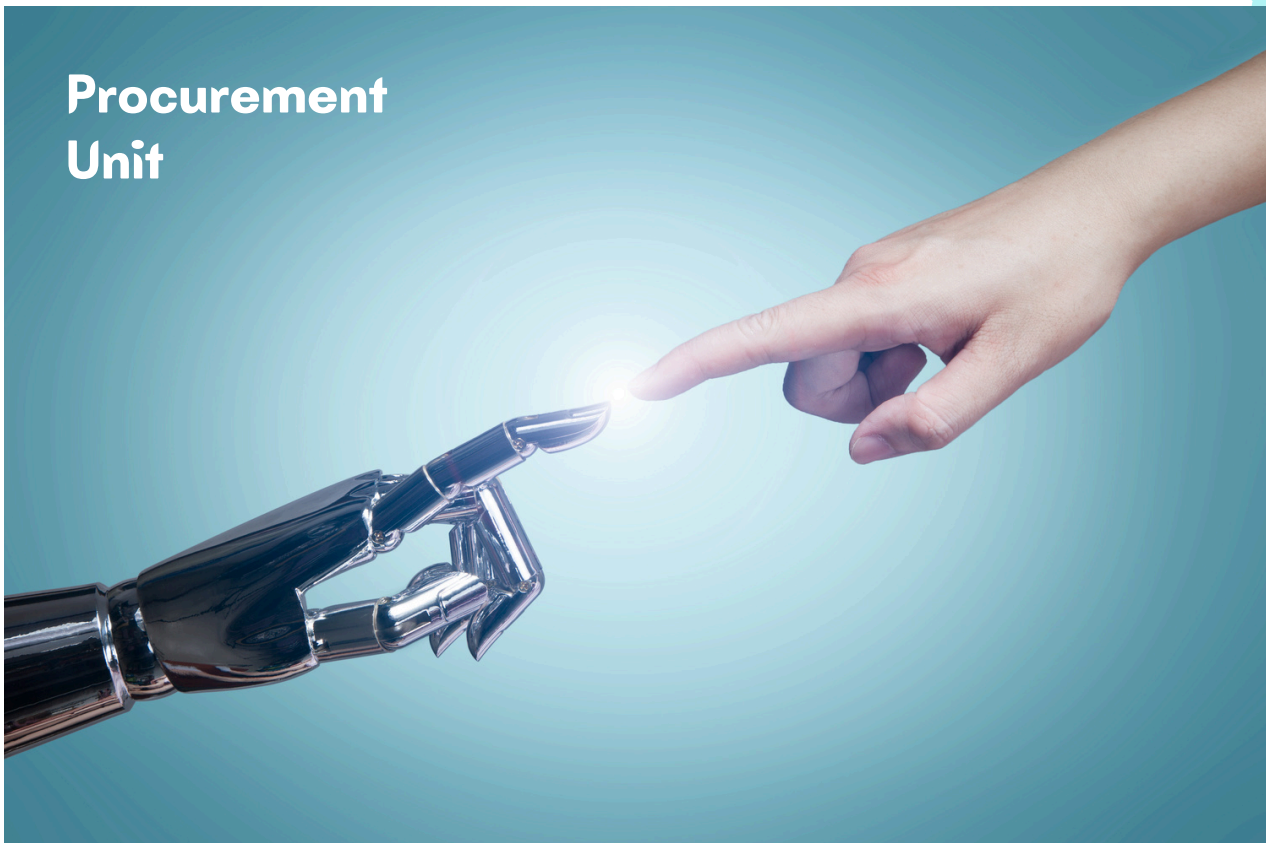
### **AI Credit Scoring Analyst:**

Develops AI-based credit scoring models and evaluates credit applications using AI. Ensures more accurate and reliable credit assessments.





# Procurement Unit



## **AI Procurement Specialist:**

Uses AI to optimize procurement processes. Analyzes supply chains to make material acquisitions more efficient and achieve cost savings.

## **AI Supply Chain Analyst:**

Conducts AI-driven analyses and forecasts to improve supply chain efficiency. Optimizes procurement decisions, from supplier selection to inventory management.

## **AI Vendor Management Specialist:**

Manages vendor relationships and evaluates their performance using AI technologies. Performs supplier analyses to make selection processes more objective and effective.

## **AI Cost Optimization Specialist:**

Develops AI solutions to reduce costs and increase efficiency in procurement processes. Uses AI-based analyses to identify optimal pricing and supplier options.



## Human Resources and Training Units

### **AI Recruiter:**

Utilizes AI technologies to enhance recruitment processes. Uses AI tools to identify the most suitable candidates and expedite recruitment decisions during stages such as candidate screening, interviews, and talent assessments.

### **AI Educator / Trainer:**

Trains employees and organizations on AI technologies, equipping them with the knowledge and skills to use AI tools effectively. Develops continuous training and development programs to enhance organizational capacity.

### **AI Talent Acquisition Specialist:**

Identifies AI-related talent and develops recruitment strategies to bring professionals specialized in AI into the organization. Helps build the right teams by identifying candidates with the required qualifications.



# Marketing and Business Development Units



## **AI Marketing Strategist:**

Develops marketing strategies using AI-powered tools and creates personalized campaigns. Analyzes customer behavior with AI to design targeted marketing plans.

## **AI Solutions Sales Engineer:**

Provides technical expertise on AI solutions, recommends appropriate solutions to clients, and offers technical support throughout the sales process. Explains the use cases and benefits of AI products.

## **AI-Driven Digital Marketing Specialist:**

Optimizes campaigns and enhances customer engagement using AI-based digital marketing tools. Improves digital marketing efforts by making data-driven decisions.

# Customer Experience and Design Units



## **Human-AI Interaction Designer:**

Designs user experiences (UX) to ensure AI systems interact effectively with users. Enhances the interaction between AI and users by developing interfaces and refining interaction processes.

## **AI Content Specialist:**

Creates high-quality, targeted content (such as text, visuals, and videos) using AI technologies. Utilizes AI-based tools for content creation and optimization, contributing to digital strategies.

## **AI Illustrator:**

Uses AI-based tools to create visual content and accelerate design processes. Reviews the generated visuals, corrects errors, and performs retouching to ensure they meet professional standards.

# Sustainability Unit



## **AI Sustainability Analyst:**

Leverages AI technologies to conduct data analyses and generate reports for achieving sustainability goals. Provides AI-driven forecasts and improvement suggestions on topics such as energy efficiency, carbon footprint, and resource consumption.

## **AI Environmental Impact Specialist:**

Performs AI-based analyses to assess and reduce environmental impacts. Develops AI solutions to optimize natural resource usage, improve waste management, and reduce carbon emissions.

## **AI Energy Efficiency Specialist:**

Applies AI technologies to optimize energy consumption and develops systems to enhance energy efficiency. Identifies inefficiencies in energy usage with AI and creates strategies for sustainable energy solutions.

## **AI Circular Economy Specialist:**

Develops AI-based solutions to implement circular economy principles and optimizes material reuse processes. Creates AI-driven models to reduce waste, improve recycling processes, and enable sustainable production.





## Ethics and Regulation Units

### **AI Ethics Officer:**

Oversees the adherence of AI systems to ethical standards and ensures the application of ethical guidelines during development processes. Evaluates the societal impact of AI implementations within the organization and identifies potential ethical issues in advance.

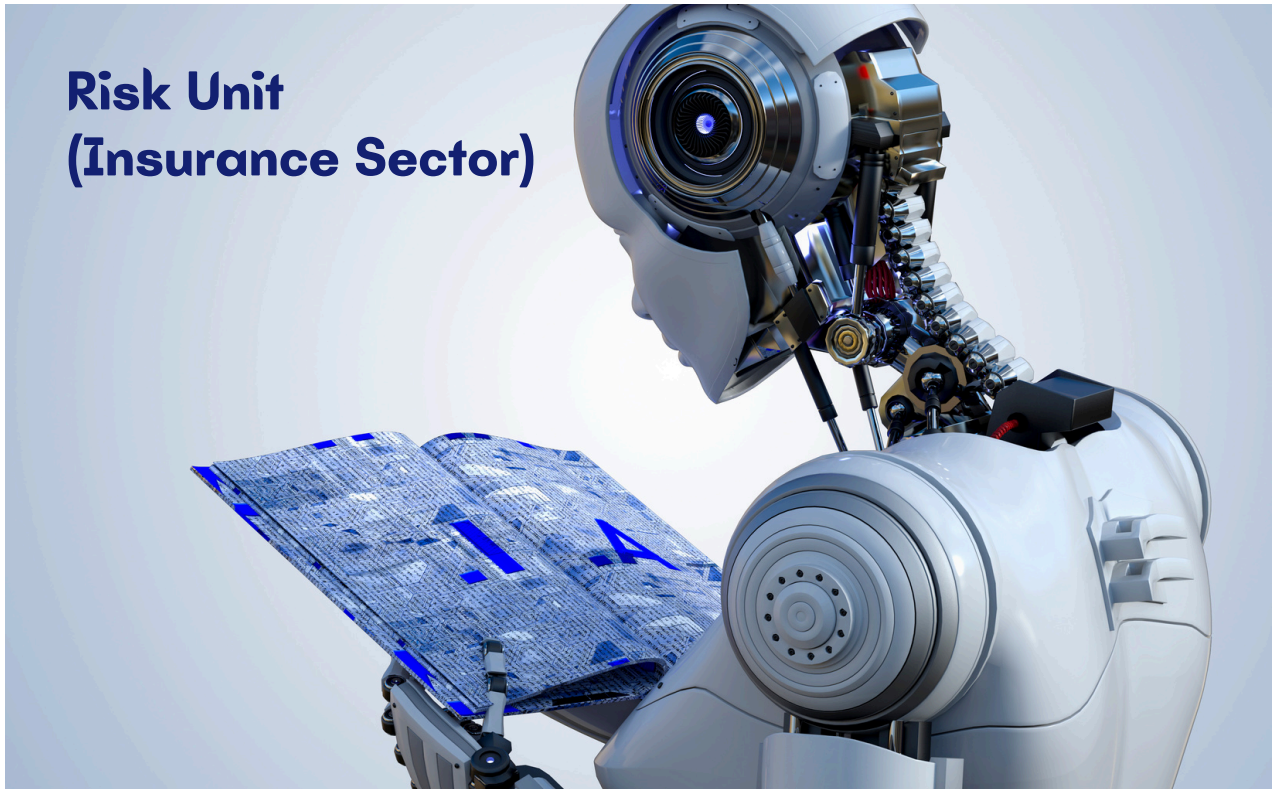
### **AI Compliance Manager:**

Conducts necessary audits to ensure AI systems comply with legal and regulatory requirements. Guarantees that the organization's AI applications align with local and international laws and industry standards.

### **AI Policy Advisor:**

Develops strategic policies and guidance related to AI and provides recommendations to company executives. Assists in the policy-making processes for AI implementations, taking into account technological, ethical, and legal aspects.

## Risk Unit (Insurance Sector)



### **AI Risk Manager:**

Monitors, evaluates, and develops risk mitigation strategies using AI-based tools. Optimizes risk management processes and creates solutions aligned with the company's risk tolerance levels.

### **AI Risk Analyst:**

Utilizes AI and machine learning techniques to analyze financial, operational, and other types of risks. Enhances the predictability of risks and contributes to the organization's risk management strategies.

### **AI Claims Assessor:**

Uses AI algorithms to assess insurance claims. Accelerates damage detection and payment processes, reducing errors and improving customer satisfaction.

### **AI Credit Risk Analyst:**

Applies AI algorithms and credit scoring systems to evaluate credit risks. Analyzes customer profiles and credit histories to minimize risks in credit approval processes.





# Investment Strategy and Asset Management

## **AI Investment Manager:**

Utilizes artificial intelligence and data analytics to assess investment opportunities and develop portfolio management strategies. Reduces risks through AI-based analysis, optimizes investment decisions, and uses algorithms to predict market trends.

## **AI Algorithmic Trader:**

Develops and optimizes trading algorithms using artificial intelligence. Implements high-frequency trading (HFT) and algorithmic trading strategies in real-time, responding quickly to market movements.

## **AI Investment Risk Analyst:**

Evaluates investment portfolios, identifies potential risks using AI algorithms, and optimizes investment strategies. This role aims to minimize risks by conducting preemptive analyses against market fluctuations.

## **AI Portfolio Manager:**

Optimizes portfolio management using artificial intelligence and algorithms. AI assists investors in creating portfolios that align with their goals and provides dynamic portfolio management that adapts to changing market conditions.





# Chapter 3

**Jobs that Work Directly with Artificial Intelligence by Technical Department**



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## Data Science and Analytics Department

### Data Scientist:

Data scientists use statistical modeling, machine learning, and data visualization techniques to extract meaningful insights from data. Their tasks include analyzing complex datasets, developing machine learning models, and making predictions to guide business decisions.

### Data Engineer:

Data engineers are responsible for the design, development, and maintenance of big data infrastructures. They set up and optimize systems necessary for data processing and analysis. Their tasks include creating data storage solutions, managing big data platforms, and making data accessible for analysis.

### AI Systems Database Administrator:

The AI systems database administrator is responsible for managing and optimizing databases for artificial intelligence systems. This role involves designing database structures necessary for storing, processing, and aligning large datasets with AI algorithms. Additionally, they ensure database security, improve data access speeds, and guarantee system performance.

### Big Data Architect:

A big data architect designs and manages big data architecture. They build data infrastructures for AI and data analytics projects, encompassing data collection, storage, processing, and analysis. Big data architects set up systems that process massive datasets and present them in formats suitable for data analysis.







## Machine Learning and AI Development Department

### **Machine Learning Engineer:**

Machine learning engineers are responsible for testing, optimizing, and implementing artificial intelligence models. These experts work on developing algorithms and improving performance.

### **AI Research Scientist:**

Conducts fundamental research in the field of artificial intelligence. They lead the industry by developing new algorithms and methods.

### **Natural Language Processing Engineer:**

Develops text-based AI applications. Works on systems such as chatbots, language translations, and speech analytics.

### **Computer Vision Engineer:**

Specializes in image recognition and processing technologies. This includes developing systems such as facial recognition or medical imaging systems.

### **AI Model Deployment Specialist:**

Responsible for the deployment and integration of AI models in live environments. They manage the necessary processes to ensure models are deployed correctly, monitored, and maintained.

### **Edge AI Developer:**

Designs edge computing systems to implement AI on smart devices. Performs data processing and analysis independently at the device level, without relying on centralized systems.

### **AI Quality Assurance Engineer:**

Tests and verifies the reliability, accuracy, and sustainability of AI models and systems. They stress-test AI algorithms, working parallel to maintenance engineers but focusing on software and algorithm levels.

### **Augmented Reality Developer for AI Systems:**

Designs AI-powered augmented reality applications. For example, they develop applications for controlling robotic systems through AR or simplifying maintenance processes with smart glasses.

### **AI Trainer:**

AI trainers provide human input for correctly training AI systems. This profession involves labeling data and managing the training processes of models.



## Software Development Department

### **AI Software Engineer:**

An AI software engineer develops AI-based applications. This role involves integrating AI algorithms into applications to solve real-world problems. For example, they design and develop software for recommendation systems, image processing, or natural language processing.

### **AI Backend Developer:**

Designs and develops the server-side software components that form the core infrastructure of AI systems. They optimize processes such as data processing, model training, and API integration. Their role is to build high-performance and scalable AI systems.

### **AI Frontend Developer:**

Designs and develops user interfaces that allow users to interact with AI systems. They optimize the user experience by presenting the complex functions of AI in a user-friendly manner. For example, they design chatbot interfaces or data visualization dashboards.

### **Cloud AI Solutions Architect:**

An expert responsible for designing and integrating cloud-based AI solutions. They ensure that AI models work in a scalable and reliable manner on cloud platforms. Additionally, they build infrastructure for processing large datasets in the cloud and deploying AI services.



## Robotics and Automation Department

### **Robotics Engineer:**

Works on the design, development, and optimization of robots. These engineers ensure that the software and hardware components of robots work in harmony.

### **Autonomous Vehicle Engineer:**

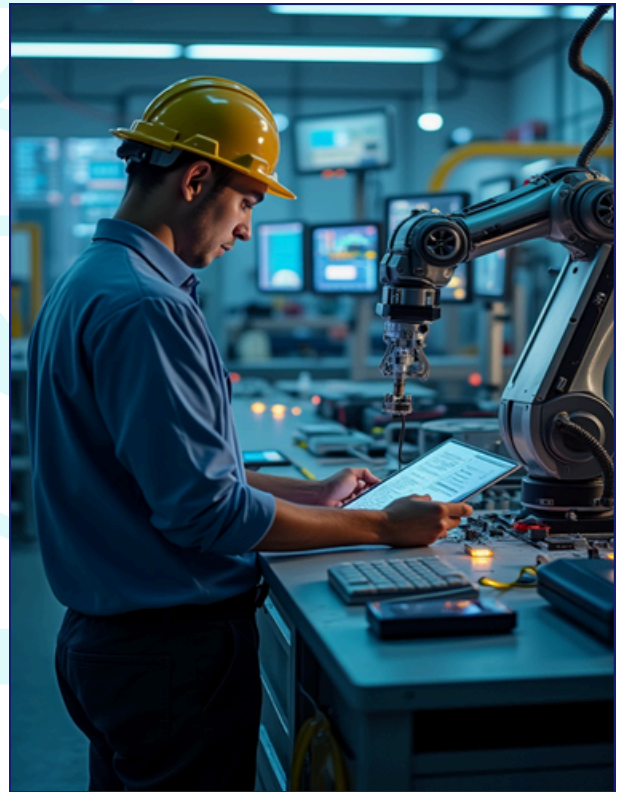
Involved in the software and hardware development of autonomous vehicles. They process sensor data to enable the vehicles to make decisions independently.

### **Human-Robot Interaction Specialist:**

Develops user interfaces and control mechanisms that allow humans to interact more efficiently and effectively with robots. This role supports the work of robotics engineers and system integrators.

### **Digital Twin Engineer:**

Creates digital replicas (digital twins) of physical systems and uses AI technologies for the optimization of these models. This role is related to system integration and robotics engineering, especially gaining importance in the manufacturing and energy sectors.





## Maintenance and Operations Departments

### AI Operations Engineer:

Ensures the seamless operation of AI systems by performing system monitoring, maintenance, and troubleshooting tasks. This role optimizes the performance of AI applications and ensures the efficient operation of operational processes.

### AI Maintenance Specialist:

Responsible for the regular maintenance of AI-based systems, applying software updates, and ensuring the proper functioning of the system. They also work on fixing errors that may occur during the training process of AI models and resolve system disruptions.

### Predictive Maintenance Engineer:

Engineers who predict maintenance needs of devices in energy infrastructure using AI models and intervene before failures occur.

### AI Systems Support Engineer:

Tasked with resolving technical issues encountered in AI-based applications and providing support. This role addresses both hardware and software issues, focusing on maintaining the operational continuity of AI systems.







## Security and Systems Integration

### **AI Security Specialist:**

Develops and implements AI-powered security solutions, optimizing defense systems against cyber threats. Additionally, designs security protocols and algorithms to ensure the security of AI-based systems.

### **AI Cybersecurity Analyst:**

Detects network threats and security vulnerabilities using AI-based cybersecurity systems. Develops firewalls and monitoring systems with AI algorithms.

### **AI Threat Intelligence Analyst:**

Uses AI and machine learning to predict and analyze potential cyber threats. Establishes AI-based threat intelligence systems to enhance organizational security.

### **AI Cloud Security Engineer:**

Develops AI-powered security solutions for cloud-based systems. Designs solutions using AI to ensure data security and access control in cloud environments.

### **AI Fraud Detection Specialist:**

Detects financial fraud using AI systems. Monitors real-time transactions and identifies abnormal behaviors using advanced data analytics and machine learning techniques to prevent fraudulent activities.

### **AI Systems Integration Engineer:**

Develops engineering solutions to integrate AI systems with existing infrastructures. Manages integration processes to ensure AI applications work seamlessly with different systems.

## Energy Sector

### Renewable Energy Specialist:

Utilizes AI-powered solutions to optimize renewable energy systems and increase their efficiency. Conducts analyses and modeling to improve energy efficiency in areas such as solar, wind, and hydroelectric energy production.

### Energy Systems Engineer:

Integrates AI technologies into energy production and distribution processes to enhance efficiency. Develops solutions using AI algorithms for the control and monitoring of energy systems, promoting energy savings and sustainability.

### Smart Grid Analyst:

Manages smart grid infrastructure and applies AI algorithms to balance energy production and consumption. Uses AI to optimize energy flows and more effectively manage the load balance on the grid.

### Virtual Power Plant Operator:

Uses AI to aggregate distributed energy resources and manage virtual power plants.

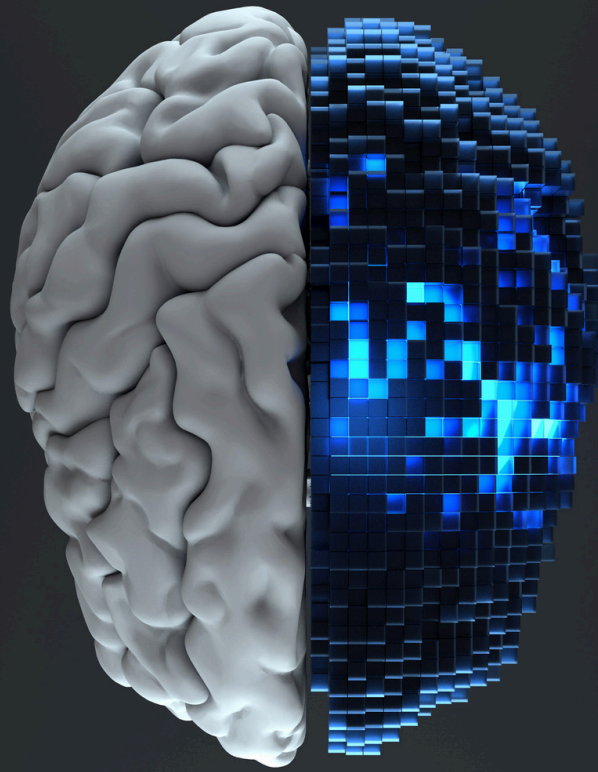
### Renewable Energy Forecasting Analyst:

Analyzes and optimizes fluctuations in renewable energy production using AI-based forecasting models.

### Energy Blockchain Specialist:

Develops solutions using blockchain technologies to make energy trading, distribution, and management more secure, transparent, and efficient. Integrates blockchain-based applications such as smart contracts and distributed ledger systems into energy trading.






# Chapter 4

## Strengthening Your Career in the Age of Artificial Intelligence



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The age of artificial intelligence is not just a technological transformation; it is also a harbinger of significant changes in careers. Professionals who adapt to this change, develop themselves, and remain open to innovation will secure a strong place in the future business world.

AI is just a tool. How you use it will be shaped by your vision and effort. Here are 5 recommendations you can benefit from:

### **Develop Your Technical Skills**

Learning the fundamentals of AI can make a significant impact on your career. You can benefit from online courses and certification programs to gain knowledge in areas such as machine learning, data science, and natural language processing (NLP).

### **Gain Industry-Specific Expertise**

Technical knowledge alone is not enough; understanding the industries where AI is applied is also critical. Explore the impact of AI in sectors like healthcare, finance, and energy, and develop solutions tailored to the needs of these industries.

### **Learn to Work with AI-Based Tools**

Working with AI-powered tools and platforms enhances your efficiency and presents a valuable skill to employers. Start learning about the AI tools relevant to your work and gain hands-on experience.

### **Adopt a Culture of Continuous Learning**

YAI is rapidly evolving and changing. Staying up-to-date is essential. Attend conferences, follow industry reports, and expand your professional network.

### **Don't Overlook Your Soft Skills**

In addition to technical expertise, communication, leadership, and problem-solving skills are crucial. Professionals who can collaborate with technical teams and think strategically are always one step ahead.

With this guide, staying ahead in the age of AI is now in your hands. By becoming part of this transformation, you can become a strong leader in the future business world.



# Deepmind Ocean

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Contact us for information about **Consulting, Technology Development, and Training with Workshops.**



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