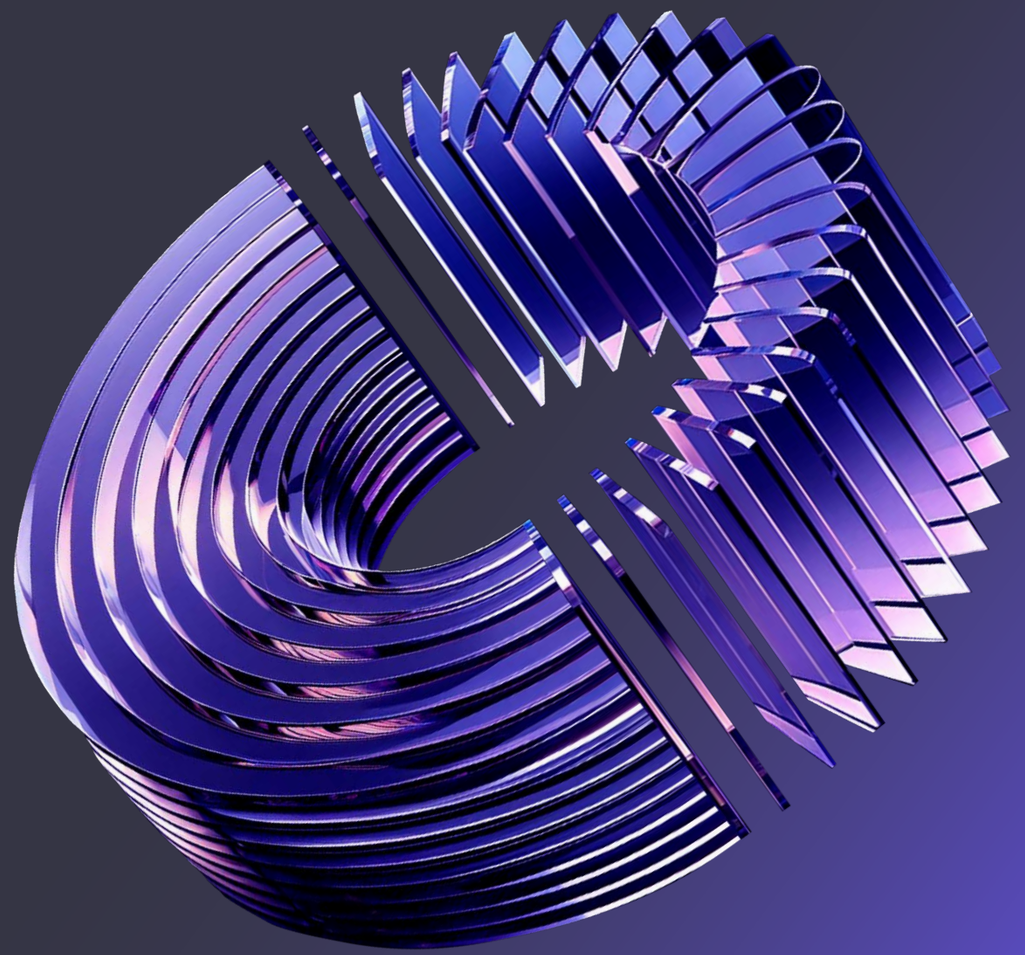
Softtek®

# Digital Profiles for 2025 & 2035



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# Prologue

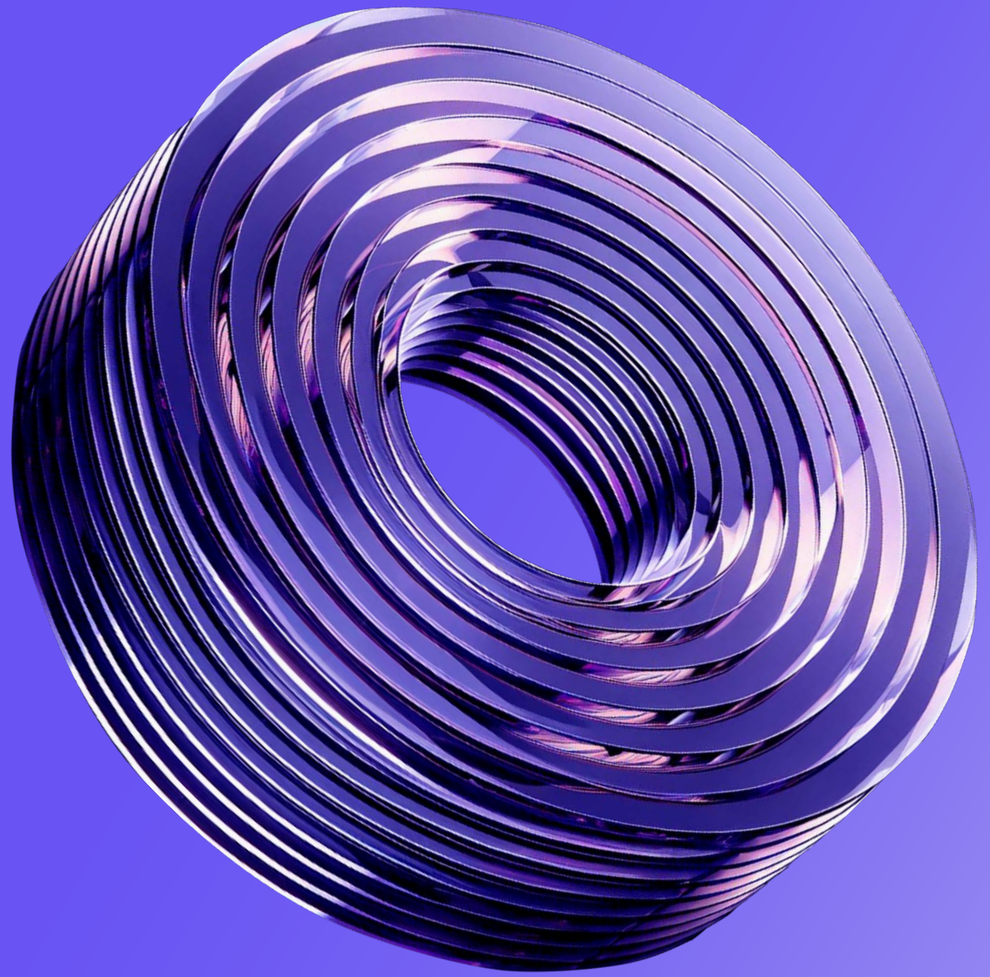
The potential of technology to generate value for organizations and society is determined by the talent's ability to develop technologies, unlock new scenarios, and redesign the future. Throughout this report, we dissect how technological evolution is driven by a combination of multidisciplinary advances that converge to respond to global competitive pressures. The analysis, framed in two temporal horizons, 2025 and 2035, highlights the dynamism of the tech sector and its ability to meet market needs and generate new opportunities.

The technological background for the near future will focus on evolving the practical applications of artificial intelligence to existing technological ecosystems, cybersecurity, the analysis and improvement of learning and decision-making systems, privacy and data protection, Cloud development, and architectural improvements to integrate AI into processes or the evolution of automation.

Our ten-year forecast presents AI as the core from which all advancements emerge. The synergy between human intelligence and artificial intelligence will mark the next industrial and technological milestone. Likewise, we outline a future in which quantum computing will leverage its full potential in creating new software, infrastructures, and never-imagined scenarios, where machines create, design, understand, and generate meaningful and creative solutions.

Technological advancements have dramatically impacted and transformed the existing landscape, redefining roles to be the engine of innovation, propelling organizations towards new frontiers.

# Key Jobs for 2025



# Key Jobs for 2025

### AI Ethics Officer

Will integrate ethical considerations into the development and application of artificial intelligence technologies, ensuring that AI projects respect ethical principles and current regulations.

### AI System Integration Engineer

Specialized in incorporating artificial intelligence systems within existing technological ecosystems in organizations, ensuring their compatibility and optimization to improve processes and services.

### Decentralized Network Developer

Focused on the development and maintenance of decentralized networks, such as those based on Blockchain, will contribute to the creation of more secure, transparent, and resilient systems.

### AI-Enhanced Cybersecurity Strategist

Will combine knowledge in cybersecurity with artificial intelligence applications to design more sophisticated and adaptive defense strategies against cyber threats.

### Cognitive Systems Analyst

Focused on analyzing and improving systems that simulate human cognitive processes, such as learning and decision-making, to create more intuitive and efficient applications.

### Data Privacy Manager

Responsible for ensuring that data handling within an organization complies with applicable data protection laws.

### AI Cloud Services Developer

Will develop and manage cloud-based solutions that integrate artificial intelligence capabilities, allowing companies to scale their operations and improve the efficiency of their services.

### Next-Gen Data Architect

Will design data architectures that support new demands for advanced analysis, artificial intelligence, and Big Data, ensuring data scalability and accessibility.

### Edge Computing Engineer

Specialist in developing Edge computing solutions to minimize latency and maximize data processing efficiency near the source.

### AI-Powered Process Automation Specialist

Will implement business process automation solutions using artificial intelligence, allowing organizations to improve their operational efficiency and reduce costs.

# 01. AI Ethics Officer

The rapid proliferation and integration of AI across all industries, from healthcare to finance, has heralded an unprecedented evolution. However, it also brings significant ethical concerns, from the inherent biases in machine learning algorithms to the broader implications of AI on moral and legal employment boundaries. The emergence of the AI Ethics Officer role will be organizations' response to these challenges.

The ability to analyze and infer from large sets of personal data poses significant privacy risks; likewise, the ethical handling of these data, ensuring they are not used to manipulate or perpetuate discriminatory situations, is paramount.

Another key aspect arises in this debate: the continuous automation of tasks generates a displacement of human labor. Training and designing a new labor future where these individuals can be freed from monotonous tasks and generate true value involves training, motivating, and evolving the professional careers of talent.

The AI Ethics Officer will play a crucial role in addressing these complex issues, balancing t he benefits of AI with the need to mitigate i ts negative impacts.

Job Description & Skills

## AI Ethics Officer

The AI Ethics Officer will find themselves at the confluence of technology, ethics, and policy. This role will involve more than applying guidelines: it is about shaping the ethical landscape in which AI operates.

### Responsibilities

- **Development of an ethical framework:** They must develop comprehensive ethical guidelines for the development and use of artificial intelligence within an organization, understanding the nuances of such technology and the potential ethical challenges, and balancing adaptability and rigor to address issues such as algorithmic transparency, data privacy, and fairness.

- **AI auditing and compliance:** They must conduct periodic reviews of projects and algorithms to ensure they meet established ethical standards. This assessment will include looking for biases, verifying data sources for ethical acquisition, and ensuring AI decision-making processes are transparent and accountable.

- **Training and awareness:** They must conduct training sessions and workshops for AI teams and stakeholders within the organization. The goal will be to educate on the importance of ethical considerations in AI and how to implement ethical practices in its development.

- **Policy advocacy and development:** They will be responsible for advising and developing policies related to AI ethics, both internally and externally in collaboration with regulatory bodies, to shape the ethical standards of the entire industry.

- **Stakeholder engagement:** They must gather concerns and perspectives about artificial intelligence ethics from stakeholders (customers, employees, and industry partners) to generate listening and participation that generates effective solutions for the entire sector.

### Tech Background

1. Knowledge of AI development tools and platforms will be essential, including an understanding of how machine learning algorithms are designed and operate.

2. Mastery of data analysis software to analyze the results of AI systems for potential ethical issues will be crucial.

3. Familiarity with regulatory frameworks and guidelines related to AI and data privacy, such as GDPR, is necessary. How Will They Generate Value? In a market increasingly aware of ethical standards, the AI Ethics Officer will not only become a guardian of ethical practices but also a catalyst for innovation and a trust generator.

How will they generate value?

In a market increasingly aware of ethical standards, the AI Ethics Officer will not only become a guardian of ethical practices but also a catalyst for innovation and a trust generator.

## Impact on Business

1. **Risk mitigation:** They must ensure that AI systems are ethically robust and comply with regulations, avoiding legal and reputational issues for organizations.
2. **Building consumer trust:** In an era where consumers are increasingly aware and concerned about how their data are used, having solid ethical practices in AI will be an important trust generator that helps build stronger and lasting relationships.
3. **Driving innovation:** Addressing ethical concerns entails generating more innovative solutions in AI development, creating more transparent algorithms or new data privacy methods that help bring significant value to the organization.
4. **Preparing the business for the future:** As regulations around AI continue to evolve, having an established ethical framework and a dedicated team will ensure that the company is at the forefront. This proactive approach to AI ethics means companies will be well-prepared for future regulatory changes.

## Challenges

- Preventing biases in AI systems, thus ensuring fair and impartial decision-making.
- Ensuring the privacy and security of data used in AI systems.
- Maintaining transparency in AI-driven decisions.

## Which Companies Will Need This Profile?

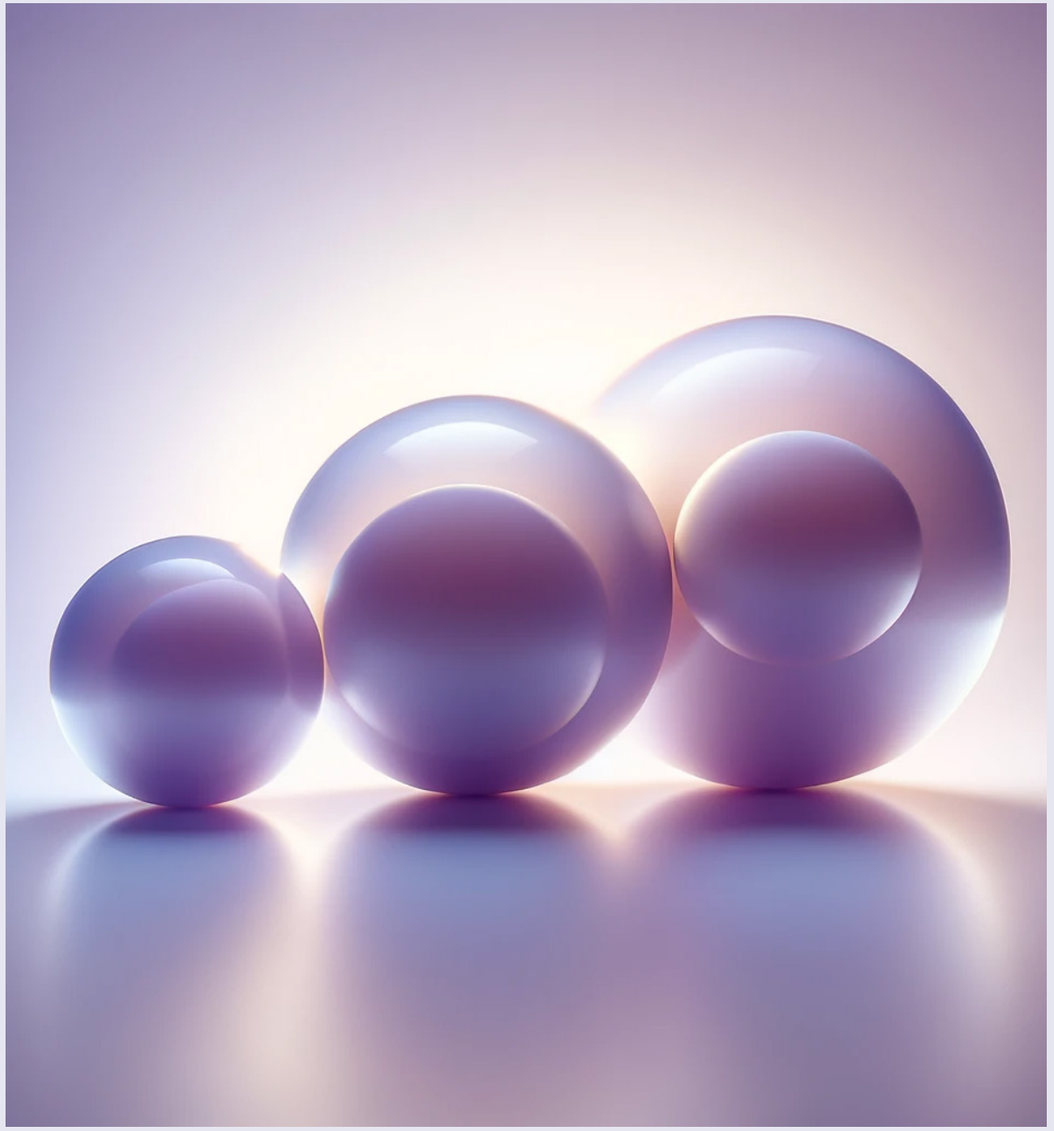
- Projects involving the development of products or services driven by AI, especially in sectors where ethical considerations are paramount, such as healthcare, finance, and public services.
- Companies that heavily rely on consumer data, where privacy and the ethical use of data are key concerns.
- Technology companies will be at the forefront of AI development, where pioneering ethical practices can set industry standards.

# 02. AI System Integration Engineer

As companies adopt Artificial Intelligence to enhance their operations, the need to integrate these solutions into existing business systems is becoming crucial. The AI System Integration Engineer will emerge as a key figure in this landscape, tasked with ensuring that AI systems not only operate optimally on their own but also have effective synergy with existing processes and infrastructures.

The integration processes will be a challenge not only technically but also from a business perspective, as they will involve a deep understanding of business processes to ensure that artificial intelligence implementations truly enhance and optimize these processes instead of disrupting them.

Therefore, the AI System Integration Engineer will play a crucial role in the digital transformation of the organization, linking the technical capabilities of AI with tangible business benefits and ensuring that AI implementations are aligned with business strategies and objectives to generate a key competitive advantage.



Job Description & Skills

## AI System Integration Engineer

The AI System Integration Engineer will be a hybrid role requiring a combination of technical expertise, business knowledge, and project management skills.

### Responsibilities

- **Technical integration:** Design and implementation of solutions that integrate AI systems into existing business infrastructures such as Cloud architectures, enterprise software, or data storage systems.
- **Alignment with business processes:** Alignment of artificial intelligence solutions with business objectives to ensure that AI implementations enhance operations.
- **System optimization:** Continuous monitoring and optimization of AI system performance within the business environment, including troubleshooting, system updates, and ensuring they remain efficient and effective.
- **Stakeholder collaboration:** Effective communication to ensure collaboration with stakeholders, including IT teams, business leaders, and internal providers, to ensure alignment and fulfillment of strategic objectives.
- **Training and support:** Training users of artificial intelligence systems to make effective use of these systems.

### Tech Background

1. Mastery of AI technologies and tools, including machine learning libraries and frameworks.
2. Solid understanding of enterprise software systems, cloud computing (AWS, Azure, Google Cloud), and data management platforms.
3. Knowledge of programming languages commonly used in AI and system integration, such as Python, Java, and SQL.
4. Familiarity with project management tools and methodologies.

How will they generate value?

The AI System Integration Engineer will be responsible for bridging the gap between artificial intelligence technology and business value, playing a key role in driving business transformation.

## Impact on Business

1. **Operations optimization:** By effectively integrating AI systems, operations will become more efficient, reducing manual effort and improving accuracy, which in turn will lead to cost savings and increased productivity.
2. **Data-driven decision-making:** The integration of AI will allow companies to leverage their data more effectively, leading to better-informed decision-making. The AI System Integration Engineer will ensure that such tools are properly utilized to provide meaningful insights.
3. **Competitive advantage:** Companies that successfully integrate AI into their operations achieve better market positioning, which is why AI implementations must be robust both technically and strategically.
4. **Facilitation of innovation:** The deployment of AI, in both new and existing processes, will lead to the development of new products, services, and business models.

## Challenges

- Overcoming technical and compatibility issues during AI system integration.
- Ensuring that AI implementations do not disrupt existing business processes.
- Aligning AI solutions with business objectives and strategies.

## Which Companies Will Need This Profile?

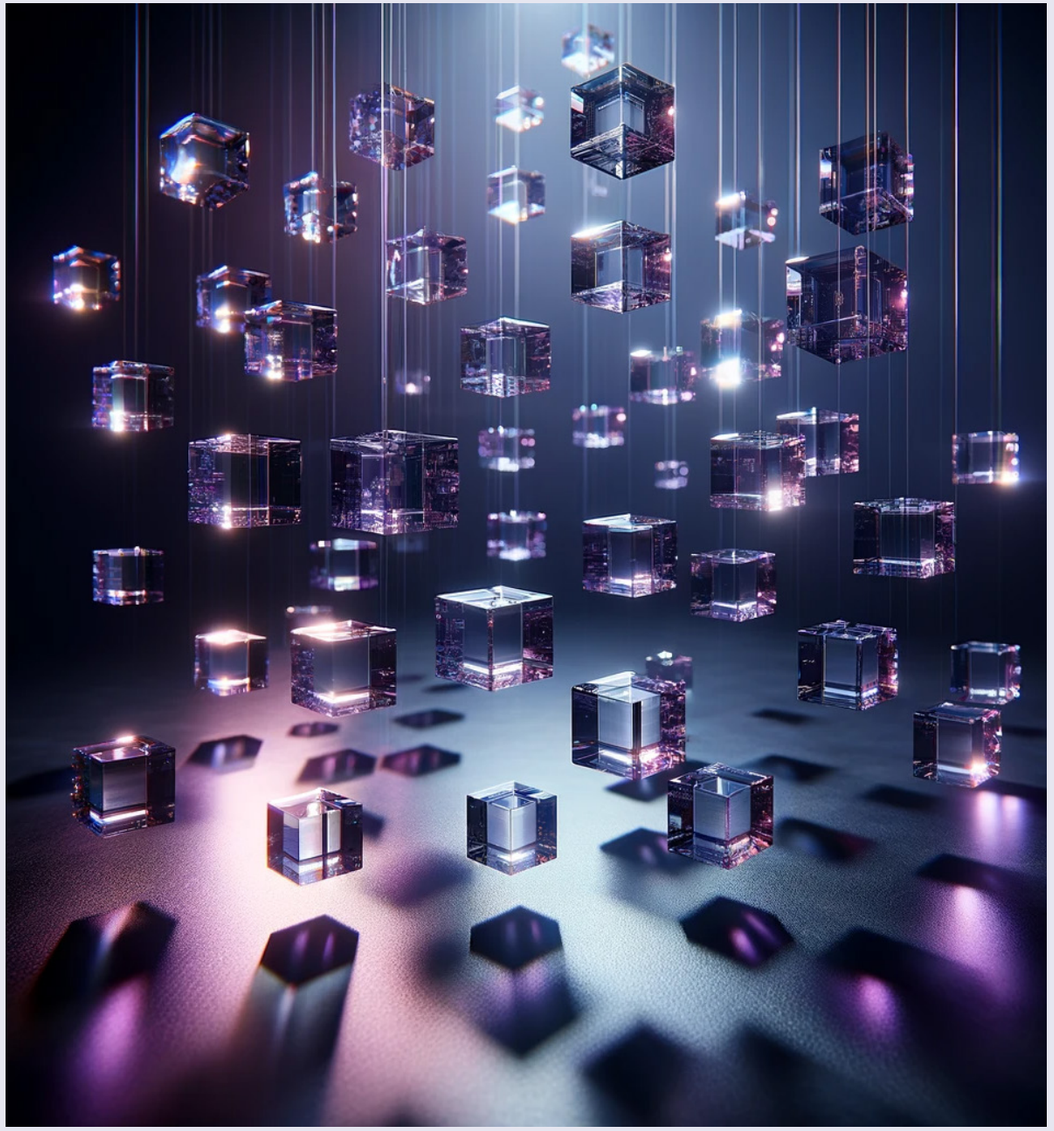
- Projects involving the integration of AI into complex business systems, especially in sectors such as finance, retail, and healthcare.
- Companies in the process of digital transformation seeking to leverage AI to improve their operations.
- Companies of all sizes, from startups implementing their first AI systems to large corporations updating their legacy systems with AI capabilities.

# 03. Decentralized Network Developer

The rise of Blockchain technology and the increasing emphasis on data privacy and security will lead to the emergence of the Decentralized Network Developer role as a response to the need for secure, transparent, and resilient network systems across all industries.

Decentralized networks, unlike traditional centralized networks, distribute data across multiple nodes, offering security, transparency, and immutability, key issues in applications such as financial transactions or supply chain management.

The role of the Decentralized Network Developer will emerge to address these needs, focusing on the development and management of networks that leverage decentralization to improve security, efficiency, and trust. With the growing adoption of Blockchain and similar technologies, this role will become crucial in sectors requiring robust and transparent data handling and transaction processing.



Job Description & Skills

## Decentralized Network Developer

The Decentralized Network Developer will be at the forefront of designing, implementing, and managing networks that operate on the principles of decentralization.

### Responsibilities

- **Design and development of networks:** Creating the architecture for decentralized networks, from selecting the appropriate blockchain platform to creating customized solutions that meet specific security, scalability, and performance requirements.
- **Development of smart contracts:** Writing and implementing self-executing contracts with the terms of the agreement directly written into code, to automate processes and ensure trust and transparency in transactions.
- **Enhancing security:** Ensuring the security of decentralized networks. This will involve conducting periodic audits to identify potential vulnerabilities and implementing security protocols to protect the network against attacks.
- **Performance optimization:** Continuously monitoring and optimizing the network to ensure efficient operation.
- **Collaboration and advising:** Collaborating with IT and advising stakeholders about the capabilities and limitations of decentralized networks.

### Tech Background

1. Mastery of blockchain technologies and platforms such as Ethereum, Hyperledger, or custom blockchain solutions.
2. Programming skills, particularly in languages relevant to Blockchain development like Solidity for Ethereum-based applications.
3. Understanding of cryptography and network security principles.
4. Familiarity with distributed computing and data storage solutions.

How will they generate value?

The Decentralized Network Developer will play a crucial role in business transformation by modernizing operations and improving data handling processes through decentralized networks.

## Impact on Business

1. **Enhanced security:** One of the main benefits of decentralized networks is improved security by distributing data across multiple nodes. These networks are less vulnerable to attacks and data breaches.
2. **Increased transparency and trust:** Decentralized networks offer unprecedented transparency, making them ideal for applications where trust is essential, such as supply chain management and financial transactions.
3. **Cost reduction:** By automating processes through smart contracts and reducing reliance on intermediaries, decentralized networks can significantly reduce operational costs.
4. **Innovation and competitive advantage:** The ability to implement decentralized networks positions companies at the forefront of innovation, offering a competitive advantage in an increasingly digital market.

## Challenges

- Mitigating risks associated with centralized data storage and management.
- Addressing issues of transparency and trust in transactions and data handling.
- Reducing operational costs and improving efficiency through automation.

## Which Companies Will Need This Profile?

- Projects that require secure and transparent data management, such as identity verification systems.
- Companies looking to innovate and improve the security of their data and operational efficiency, especially those handling sensitive information.
- Startups and established companies seeking to leverage Blockchain technology for various applications, from Fintech to logistics.

# 04. AI-Enhanced Cybersecurity Strategist

Cybersecurity threats are becoming more sophisticated and widespread, necessitating an equally advanced defense mechanism. The role of AI-Enhanced Cybersecurity Strategist emerges from this need, combining the prowess of artificial intelligence with traditional cybersecurity strategies.

The proliferation of AI technologies opens new avenues both for enhancing security measures and for creating new cyber threats. Therefore, the role of the AI-Enhanced Cybersecurity Strategist will be crucial in leveraging AI to bolster cybersecurity defenses while also staying ahead of AI-driven cyber threats.

This role will become more relevant as sectors increase the amount of sensitive data they accumulate to analyze and define their business strategies. The need for their security and for advanced measures to ensure it will become critical for all organizations. The AI-Enhanced Cybersecurity Strategist must be at the forefront in this battle, ensuring that companies can benefit from artificial intelligence and, in turn, avoid being victims of its misuse.

Job Description & Skills

## AI-Enhanced Cybersecurity Strategist

An AI-Enhanced Cybersecurity Strategist must combine expertise in AI technologies with cybersecurity principles to develop and implement advanced security strategies.

### Responsibilities

- **Development of AI-driven security solutions:** Design and implementation of security solutions based on artificial intelligence using AI algorithms to predict, detect, and respond to cyber threats more efficiently.
- **Threat intelligence analysis:** Using AI to analyze threat data from various sources, identifying emerging cybersecurity threats and trends.
- **Formulation of security policies:** Development and updating of cybersecurity policies and procedures that incorporate AI technologies, ensuring compliance with regulatory standards and best practices in cybersecurity.
- **Incident response coordination:** Leveraging AI to enhance the speed and effectiveness of incident response, automating certain aspects of the response process and using AI to assist in decision-making during a security incident.
- **Stakeholder collaboration:** Collaborating with IT teams, management, and external providers to ensure a cohesive cybersecurity strategy.

### Tech Background

1. Mastery of AI and machine learning technologies, with a focus on their application in cybersecurity.
2. Solid background in cybersecurity principles, including knowledge of various types of cyber threats and defense mechanisms.
3. Familiarity with cybersecurity tools and platforms that incorporate AI, such as automated threat detection systems.
4. Skills in data analysis and interpretation to understand the outcomes of AI-driven security systems.

How will they generate value?

The AI-Enhanced Cybersecurity Strategist will play a vital role in transforming how organizations approach and manage cybersecurity, revolutionizing cybersecurity with the integration of artificial intelligence.

## Impact on Business

1. **Proactive threat detection:** One of the biggest advantages of incorporating AI into cybersecurity is the shift from reactive to proactive threat detection. AI algorithms can predict and identify potential threats before they materialize, allowing organizations to thwart attacks early.
2. **Efficiency in incident response:** AI improves the speed and efficiency of incident response, reducing the time and resources needed to manage cybersecurity incidents.
3. **Adaptive security posture:** AI algorithms can learn and evolve, continuously improving the organization's defense mechanisms in response to changing threat landscapes.
4. **Cost-effective security management:** By automating routine tasks and enhancing threat detection, AI-driven cybersecurity strategies can reduce the overall costs associated with cybersecurity management.

## Challenges

- Addressing the growing sophistication of cyber threats, particularly those driven by AI.
- Managing the large volume of data and alerts generated by traditional cybersecurity tools, which often leads to alert fatigue.
- Ensuring compliance with evolving cybersecurity regulations and standards.

## Which Companies Will Need This Profile?

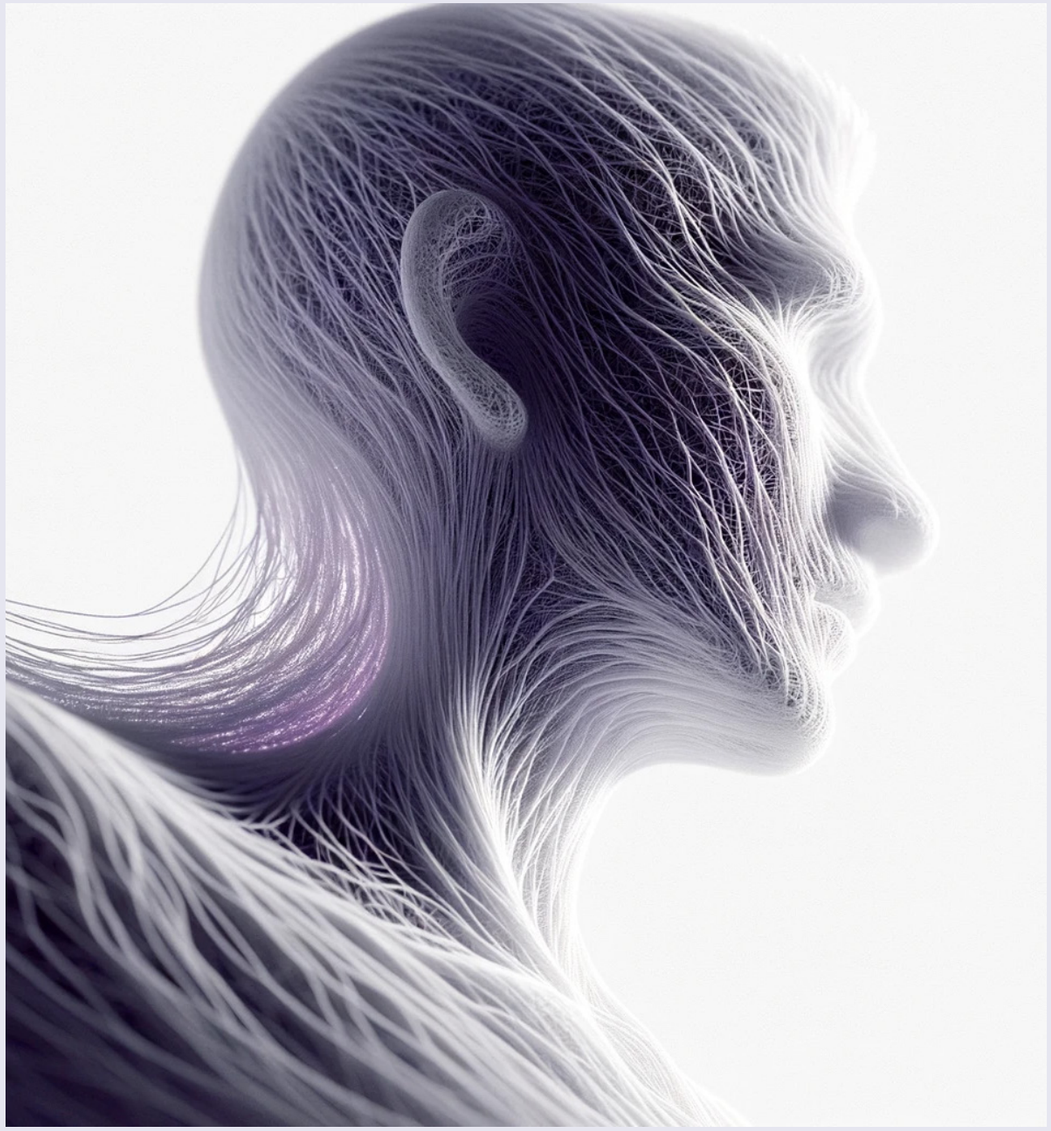
- Projects involving the development and implementation of AI-driven cybersecurity solutions, especially in sectors that handle sensitive data.
- Companies looking to modernize their cybersecurity posture to address the growing complexity of cyber threats.
- Organizations of all sizes, from startups to large enterprises, seeking to leverage AI to enhance cybersecurity.

# 05. Cognitive Systems Analyst

Organizations will seek to leverage the power of cognitive computing to mimic human thought processes and to provide deeper insights. It is at this confluence of cognitive sciences and advanced computing technologies where the role of the Cognitive Systems Analyst will emerge. Their ability to analyze and optimize these systems will be fundamental in the creation of computing models.

Systems that simulate human thought processes will be capable of learning, reasoning, and making decisions, offering unprecedented opportunities for businesses to improve efficiency, personalize customer experiences, or solve complex problems. However, the complexity and sophistication of these systems demand a specialized skill set to ensure they are designed and utilized effectively.

The Cognitive Systems Analyst will play a crucial role in industries where decision-making is complex and presents scenarios that are difficult to analyze due to their dynamism or the number of agents involved. Leading in complex systems requires being at the forefront of technology and business knowledge.



Job Description & Skills

## Cognitive Systems Analyst

The Cognitive Systems Analyst will specialize in the analysis, design, and optimization of cognitive computing systems.

### Responsibilities

- **Analysis and design of systems:** analyze business needs and design cognitive systems to meet them. To do this, they must understand the specific cognitive functions to be replicated and ensure the system can process and analyze data effectively.
- **Development and training of models:** select appropriate machine learning algorithms, integrate relevant data, and ensure the system can adapt and learn over time.
- **Performance optimization:** continuously monitor the performance of cognitive systems through system results analysis and user feedback to improve accuracy and efficiency.
- **Collaboration and communication:** work with various stakeholders, including IT teams, business leaders, and end-users, to ensure that cognitive systems are aligned with business goals and user needs.
- **Research and development:** stay up-to-date with the latest developments in cognitive computing and machine learning, and research new techniques and technologies that could enhance the capabilities of cognitive systems.

### Tech Background

1. Strong expertise in machine learning technologies and cognitive computing.
2. Proficiency in programming languages commonly used in AI development, such as Python or R.
3. Knowledge of data analytics and the ability to interpret complex data sets.
4. Familiarity with cognitive computing platforms and tools.

How will they generate value?

The Cognitive Systems Analyst is crucial for harnessing the potential of cognitive computing, a key technology in the transformation of business processes such as intelligent decision-making and efficiency.

## Impact on Business

1. **Improved decision-making:** cognitive systems will process and analyze vast amounts of data, providing insights for more informed and effective decision-making.
2. **Enhanced customer experiences:** by understanding customer needs and behavior, cognitive systems will personalize interactions, significantly improving customer experiences and satisfaction.
3. **Operational efficiency:** cognitive systems will automate complex tasks, reducing employee workload and increasing overall operational efficiency.
4. **Innovative problem**-solving: the ability of cognitive systems to learn and reason will enable businesses to address complex problems innovatively, opening up new opportunities and solutions.

## Challenges

- Managing the complexity of data-based decision-making processes.
- Ensuring cognitive systems are aligned with business goals and ethical standards.
- Staying up-to-date with the rapid evolution of cognitive computing technologies.

## Which Companies Will Need This Profile?

- Projects involving the implementation of cognitive computing solutions in data-rich environments.
- Businesses seeking to improve their decision-making processes and customer interactions through advanced data analysis.
- Organizations from various sectors looking to leverage cognitive computing for strategic innovation.

# 06. Data Privacy Manager

The need for organizations to protect the integrity, confidentiality, and privacy of data is becoming increasingly complex in the new paradigm of intelligent business. Likewise, the exponential increase in data protection regulations globally and its complex regulatory landscape will necessitate the figure of the Data Privacy Manager.

Companies will face this dual challenge thanks to the evolution of technology and associated techniques and the governance of the Data Privacy Manager, ensuring regulatory compliance and privacy for their customers as well as their employees or suppliers.

The emergence of the Data Privacy Manager will be driven by growing concern from customers about data privacy. Consumers are more informed and cautious about how their data are used and shared, leading to a demand for greater transparency and accountability from businesses.

Job Description & Skills

## Data Privacy Manager

The Data Privacy Manager will be responsible for overseeing an organization's data privacy program, ensuring compliance with data protection laws, and managing data privacy risks.

### Responsibilities

- **Development and management of privacy programs:** Create and manage a comprehensive data privacy program, including the development of policies and procedures that align with data protection regulations.
- **Compliance monitoring:** Regularly monitor and audit the company's practices to ensure compliance with data privacy laws, paying special attention to changes in legislation to adapt the privacy program accordingly.
- **Data privacy risk assessment:** Conduct risk assessments to identify areas where an organization's data handling practices could pose privacy risks and recommend measures to mitigate these risks.
- **Training and awareness:** Develop and deliver training programs to educate employees about data privacy principles, their roles in maintaining privacy, and the importance of compliance.
- **Incident management:** Manage and respond to data privacy incidents, including data breaches, coordinating with different departments, reporting to regulatory bodies, and managing communications with affected individuals.

### Tech Background

1. Familiarity with data protection tools and compliance software.
2. Knowledge of global data protection laws.
3. Solid understanding of information technology and data management practices.
4. Skills in risk assessment, policy development, and incident response.

How will they generate value?

The Data Privacy Manager will play a crucial role in data protection and in building trust with all stakeholders.

## Impact on Business

1. **Regulatory compliance:** Successfully meet the challenge of the critical regulatory and legal framework, especially critical in organizations operating in multiple jurisdictions.
2. **Reputation management:** In a world where data breaches can significantly damage a company's reputation, having solid data privacy practices is essential. The Data Privacy Manager will help prevent breaches and manage any that occur effectively, minimizing reputation damage.
3. **Customer trust and loyalty:** Maintaining high standards of data privacy plays a fundamental role in creating and maintaining customer trust and that of other stakeholders.
4. **Strategic decision-making:** By providing insights into data privacy risks and compliance requirements, the Data Privacy Manager will assist in making informed strategic decisions, particularly when launching new products or entering new markets.

## Challenges

- Complying with global data privacy regulations.
- Managing the risk of data breaches and other privacy incidents.
- Balancing the use of data for business purposes with the need to protect individual privacy.

## Which Companies Will Need This Profile?

- All organizations will need the figure of the Data Privacy Manager to protect their strategic information and the data of their stakeholders.
- Projects involving the collection, processing, and storage of personal data, especially those requiring compliance with multiple data protection regulations or located in multiple jurisdictions.
- Companies seeking to establish or improve their data privacy programs as part of their corporate governance and risk management strategies.

# 07. AI Cloud Services Developer

The AI Cloud Services Developer will become a crucial link between artificial intelligence and cloud computing technologies. This role will be the answer to the growing demand for scalable, efficient, and sophisticated AI solutions that cloud platforms can provide. As businesses increasingly rely on AI for various applications, from data analysis to customer service, the need for seamless integration of AI into cloud infrastructure becomes paramount.

The proliferation of cloud computing has revolutionized the way businesses store and process data. When combined with AI, it unlocks new potentials for scalability, flexibility, and computing power. AI Cloud Services Developers will be at the forefront of this integration, specializing in creating and managing AI solutions within the cloud environment.

This role will be vital in sectors where data are abundant and AI insights are crucial for decision-making and innovation. The expertise of AI Cloud Services Developers will ensure that businesses can leverage the full potential of AI without the need for extensive local infrastructure, thereby reducing costs and improving efficiency.

Job Description & Skills

## AI Cloud Services Developer

The AI Cloud Services Developer will focus on designing, implementing, and maintaining AI solutions in cloud environments.

### Responsibilities

- **Development of AI solutions:** Developing AI models and algorithms tailored to cloud platforms to optimize performance and scalability.
- **Cloud integration:** Integrating artificial intelligence solutions into cloud infrastructures to ensure they function optimally.
- **AI services management:** Overseeing the deployment, scaling, and management of AI services within the cloud, including monitoring the performance of AI applications and making necessary adjustments to meet changing demands.
- **Data management:** Efficient and secure handling of data within AI applications, especially in cloud environments, from data storage, processing, and compliance with data protection regulations.
- **Collaboration and innovation:** Collaborating with cross-functional teams to align cloud AI services with business needs and exploring innovative ways to leverage AI in the cloud for new applications and services.

### Tech Background

1. Mastery of AI development frameworks (such as TensorFlow or PyTorch) and cloud computing platforms (AWS, Azure, Google Cloud).
2. Skills in programming languages relevant to AI and cloud computing, such as Python, Java, and SQL.
3. Understanding of cloud architecture, including Serverless Computing, microservices, and containerization (Docker, Kubernetes).
4. Knowledge of best practices for data privacy and security in cloud environments.

How will they generate value?

The AI Cloud Services Developer will be crucial in driving innovation and efficiency through the integration of AI in cloud environments.

## Impact on Business

1. **Scalable AI solutions:** One of the key benefits of integrating AI with cloud services is scalability. Businesses will be able to easily scale up or down their AI solutions based on demand, optimizing costs and resource use.
2. **Rapid innovation:** The cloud environment allows for the quick deployment and iteration of AI models, generating rapid innovation and a more agile response to market changes.
3. **Data-based insights:** AI Cloud Services Developers will enable businesses to leverage vast amounts of data stored in the cloud for AI-based analysis, providing valuable insights for decision-making.
4. **Operational efficiency:** By automating and optimizing processes with AI in the cloud, businesses can achieve greater operational efficiency and agility.

## Challenges

- Overcoming the technical complexities of integrating AI into cloud platforms.
- Managing the performance and scalability of AI applications in the cloud.
- Ensuring data privacy and security in cloud-based AI services.

## Which Companies Will Need This Profile?

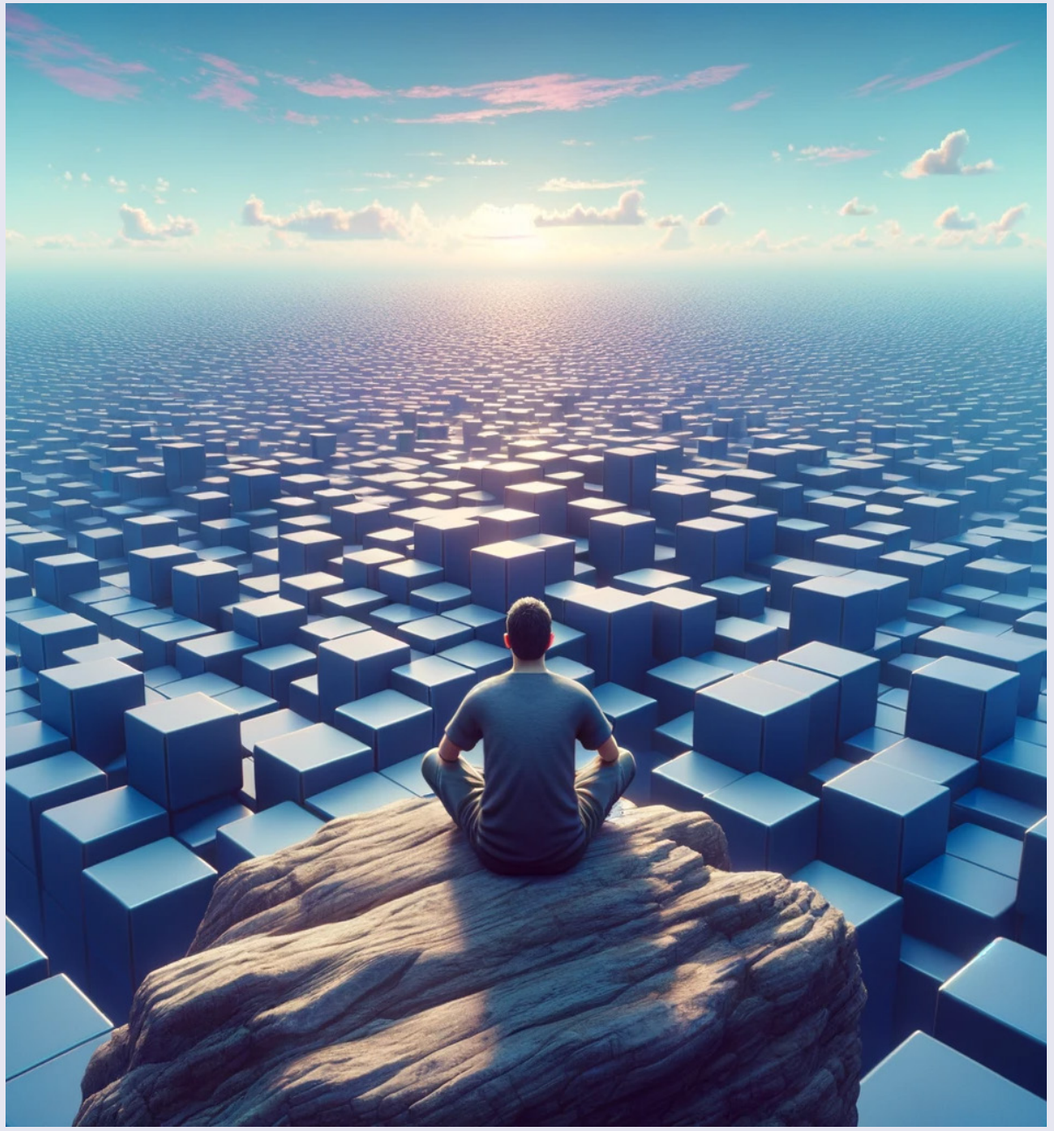
- Projects involving the development of AI-driven applications, such as predictive analytics, customer service bots, and personalized marketing tools.
- Companies in data-intensive sectors, like finance, healthcare, and retail, requiring scalable and powerful AI solutions.
- Organizations looking to innovate and stay competitive through the use of AI and cloud computing.

# 08. Next-Gen Data Architect

The role of the Next-Gen Data Architect will emerge from the need to design data systems capable of efficiently handling, processing, and leveraging massive data sets in an increasingly digital world.

The traditional role of the data architect has evolved to encompass new challenges and technologies. Current data architectures must be scalable, flexible, and robust enough to handle Big Data and real-time analytics while ensuring privacy and security compliance. The advent of technologies such as machine learning, the Internet of Things (IoT), and cloud computing requires architectures that are not only robust but also agile and adaptable.

The Next-Gen Data Architect will play a crucial role in designing these advanced data systems so that data management can support business needs in a dynamic environment and drive innovation in a data-centric economy.



Job Description & Skills

## Next-Gen Data Architect

The Next-Gen Data Architect will be responsible for designing and implementing data strategies that address the needs of businesses.

### Responsibilities

- **Development of data strategies:** Develop strategies that align with strategic business objectives driven by technological advancements.
- **Architecture design:** Design scalable, secure, and efficient data architectures, select suitable data storage solutions, and integrate various data sources.
- **Technological integration:** Incorporate emerging technologies such as AI, machine learning, and IoT into data architectures to enhance data processing and analysis capabilities.
- **Compliance and security:** Ensure data architectures comply with data protection laws and are secure against cyber threats, through the implementation of data governance policies and security measures.
- **Collaboration and advising:** Collaborate with IT teams, data scientists, and business stakeholders to ensure the data architecture meets the diverse needs of the organization.

### Tech Background

1. Experience with database management systems, Big Data technologies (Hadoop, Spark), and cloud data services (AWS, Azure, Google Cloud).
2. Skills in programming languages relevant to data architecture, such as SQL, Python, and Scala.
3. Knowledge of data modeling techniques and data integration tools.
4. Familiarity with data governance and compliance regulations.

How will they generate value?

The Next-Gen Data Architect will be crucial in building the data infrastructure that underpins data-based organizations.

## Impact on Business

1. **Enabling Data-Driven Decision Making:** By creating architectures capable of supporting robust data analytics, businesses will be able to make more informed decisions, achieving better performance and competitiveness.
2. **Facilitating innovation:** Efficient data architecture will enable the exploration of new business opportunities, such as personalized customer experiences, predictive analytics, and automated decision-making systems.
3. **Improving efficiency and reducing costs:** Optimized data architectures will streamline data processing and storage, reducing operational costs and improving efficiency.
4. **Ensuring compliance and security:** A well-designed data architecture is key to ensuring compliance with data protection laws and protecting data against breaches and cyberattacks.

## Challenges

- Handling the growing volume and complexity of data in a scalable and efficient manner.
- Integrating new technologies such as AI and IoT into existing data architectures.
- Balancing the need for accessible and real-time data with privacy and security requirements.

## Which Companies Will Need This Profile?

- Any data-based organization with the need to implement a robust infrastructure that allows them to be competitive.
- Projects requiring advanced data analysis capabilities, such as customer data platforms and real-time analytics systems.
- Companies undergoing digital transformation, seeking to leverage their data assets for business growth and innovation.

# 09. Edge Computing Engineer

The role of the Edge Computing Engineer will become a key component in the changing landscape of network architecture and data processing. This role will be a response to the growing need to process data closer to its source, which is essential in the era of the Internet of Things (IoT), autonomous vehicles, and other real-time data-based technologies.

Edge Computing represents a paradigm shift from data processing in cloud data centers to Edge of the Network processing. This shift will be driven by the need for real-time data processing, reduced latency, and bandwidth savings, especially in applications where instant decision-making is crucial. Edge Computing will be particularly relevant in scenarios where connectivity to a central data center is limited or where immediate data processing is essential for operational effectiveness.

The role of an Edge Computing Engineer will be crucial in designing, implementing, and maintaining the infrastructure and systems necessary for Edge Computing. This will include creating solutions that can process and analyze data at the edge, ensuring quick and efficient responses to local events.

Job Description & Skills

## Edge Computing Engineer

The Edge Computing Engineer will specialize in the development and management of computing infrastructure at the Network's Edge.

### Responsibilities

- **Design and implementation of systems:** Design and implement Edge Computing infrastructure and solutions, selecting the appropriate hardware and software to function in diverse and potentially challenging environments.
- **Data processing and analysis:** Implement systems for Data at the Edge processing and analysis, and develop algorithms and applications for local decision-making, without relying on a central server.
- **Performance optimization:** Conduct periodic monitoring, updating, and troubleshooting protocols to maintain optimal performance.
- **Integration with IoT and other technologies:** Integrate Edge Computing systems with IoT devices and other technologies such as 5G networks, to ensure optimal operation and data flow.
- **Security implementation:** Implement strong security measures to protect Edge Computing systems from cyber threats, given their decentralized nature and potential vulnerabilities.

### Tech Background

1. Knowledge of Edge Computing hardware and software, including IoT platforms and specific Edge solutions.
2. Skills in programming languages relevant to systems development and data processing at the edge, such as Python, C++, and Java.
3. Understanding of network architecture, including familiarity with 5G and other wireless technologies.
4. Experience with cybersecurity best practices, especially in decentralized and IoT environments.

How will they generate value?

The Edge Computing Engineer will be key for businesses to leverage real-time data processing capabilities, improving decision-making and operational efficiency.

## Impact on Business

1. **Reduced latency:** By processing data at the Edge, businesses can significantly reduce latency in their operations, especially for applications requiring real-time decision-making, such as autonomous vehicles or manufacturing processes.
2. **Bandwidth optimization:** Edge Computing will reduce the need to send large amounts of data to central servers, saving bandwidth and reducing network congestion.
3. **Improved operational efficiency:** Real-time data processing at the Edge will enhance operational efficiency.
4. **Enhanced customer experiences:** In consumer-oriented applications, Edge Computing will provide faster and more personalized services, improving customer satisfaction.

## Challenges

- Addressing the challenges of real-time data processing in environments where immediate response is critical.
- Managing the complexities of decentralized network architecture.
- Ensuring the security and integrity of data processed at the edge.

## Which Companies Will Need This Profile?

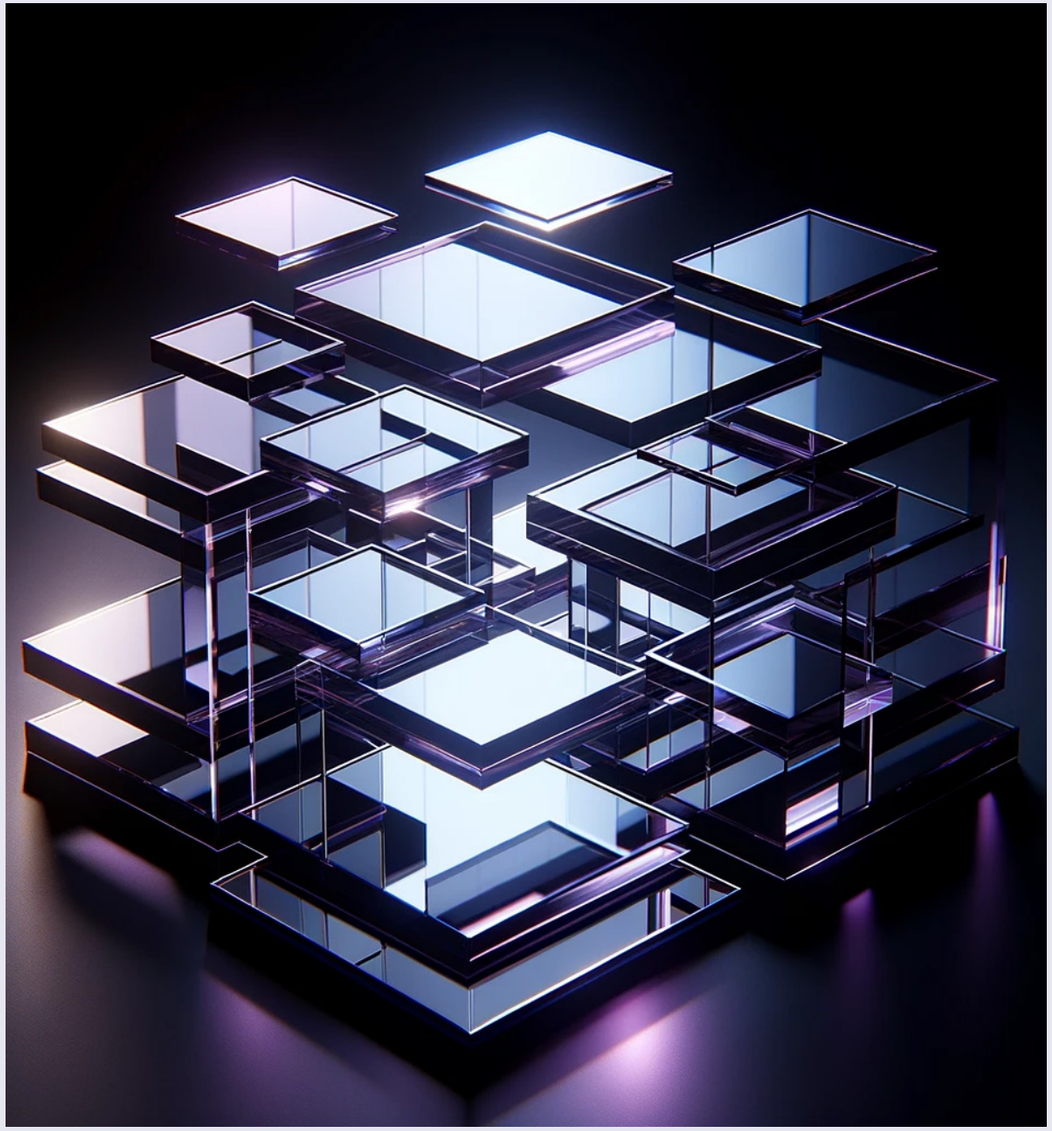
- Projects involving IoT, autonomous systems, and other technologies where real-time data processing is crucial.
- Companies in sectors such as manufacturing, healthcare, transportation, and retail that benefit from immediate data analysis and decision-making.
- Organizations looking to optimize their network architecture for efficiency and speed, especially in data-intensive applications.

# 10. AI-Powered Process Automation Specialist

The AI-Powered Process Automation Specialist will become a fundamental actor in the landscape of business process automation thanks to the rapid advancement of artificial intelligence and machine learning technologies. The scope of process automation will significantly expand, extending beyond routine tasks to more complex and cognitive functions.

This role will represent the convergence of AI and traditional automation technologies to create smarter and more adaptive automation solutions. AI-Powered Process Automation Specialists will be at the forefront of this transformation, using AI to enhance automation capabilities, making them more efficient, flexible, and capable of handling complex decision-making processes.

The emergence of this role will be driven by the growing demand for operational efficiency and the need to free up talent from repetitive tasks to allow them to focus their attention on strategic and creative tasks, optimizing workflows, improving accuracy, and reducing operational costs.



Job Description & Skills

## AI-Powered Process Automation Specialist

The AI-Powered Process Automation Specialist will focus on the design, implementation, and management of AI-enhanced automation systems.

### Responsibilities

- **Development of automation solutions:** Design and develop automation solutions that incorporate artificial intelligence, from identifying automation opportunities, selecting appropriate AI and automation tools, and customizing solutions to fit specific business processes.
- **Integration of AI into automation:** Integrate AI capabilities, such as natural language processing or machine learning, into existing automation platforms to enhance their functionality and enable them to handle more complex tasks.
- **Process optimization:** Continuously analyze and optimize automated processes, monitor performance, identify areas for improvement, and update systems to ensure maximum efficiency and effectiveness.
- **Collaboration and training:** Work with various stakeholders, including IT teams, business analysts, and end-users, to align automation solutions with needs and provide the necessary training and support.
- **Staying abreast of technological advancements:** In AI and automation technologies to continuously improve and innovate automation solutions.

### Tech Background

1. Experience in automation technologies, such as RPA tools and AI platforms.
2. Skills in programming and scripting languages relevant to automation and AI, such as Python, Java, and JavaScript.
3. Understanding of machine learning algorithms and their application in process automation.
4. Knowledge of business process management and workflow optimization.

How will they generate value?

The AI-Powered Process Automation Specialist will play a key role in transforming business operations through the implementation of intelligent automation solutions.

## Impact on Business

1. **Increased operational efficiency:** AI-enhanced automation solutions will streamline business processes, reduce errors, and increase efficiency, leading to significant cost savings and improved operational performance.
2. **Improved decision-making:** By automating data analysis and decision-making processes, companies will be able to make more informed and timely decisions, enhancing the overall agility of the business.
3. **Employee empowerment:** Automating routine tasks will free up employees to focus on higher-value work, fostering innovation and improving job satisfaction.
4. **Scalability and flexibility:** AI-driven automation systems can be easily scaled and adapted to changing business needs, providing companies with the flexibility to grow and evolve.

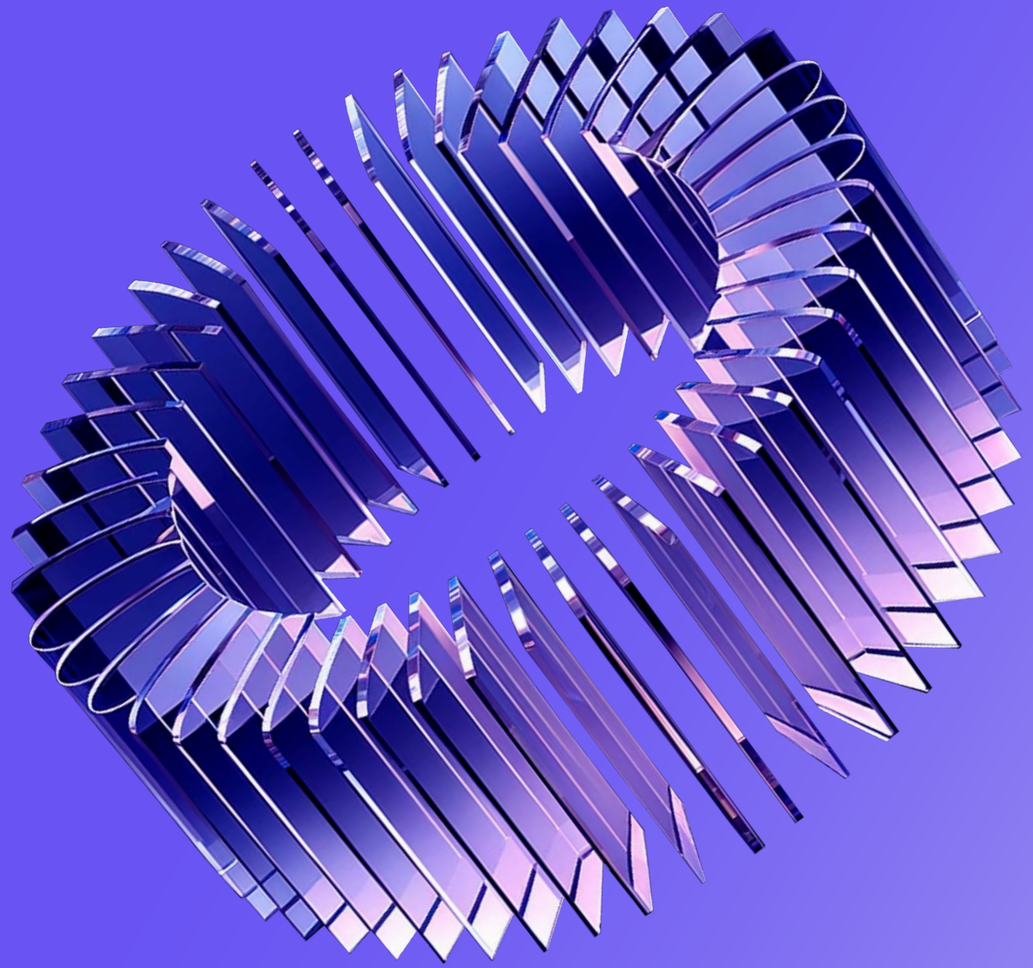
## Challenges

- Addressing the limitations of traditional automation by incorporating AI to handle complex tasks.
- Ensuring seamless integration of AI into existing automation frameworks.
- Balancing automation with human oversight to optimize processes and maintain control.

## Which Companies Will Need This Profile?

- Projects involving the automation of complex business processes.
- Companies looking to improve efficiency, reduce costs, and enhance the quality of their services through automation.
- Organizations seeking to remain competitive by adopting cutting-edge technologies in their operational processes.

# Key Jobs for 2035



# Key Jobs for 2035

**Human-AI Integration Specialist**

will ensure effective collaboration by promoting synergy between human intelligence and artificial intelligence.

**Quantum Security Analyst**

will adapt computer security and cryptography development to the era of quantum computing.

**Autonomous Systems Ethicist**

will guide the development and deployment of autonomous systems from an ethical perspective.

**Advanced AI Algorithm Developer**

will create AI algorithms capable of performing complex and advanced tasks.

**AI Behavioral Adaptation Specialist**

will enhance the ability of AI systems to understand and respond naturally and effectively to user needs.

**Autonomous Network Administrator**

will use AI and machine learning to automate the management of complex networks, ensuring their efficiency, security, and self-repair capabilities.

**Cognitive Systems Personalizer**

will personalize AI cognitive systems according to individual needs and preferences, improving user interaction and experience with smart technologies.

**Advanced Quantum Software Developer**

will work with quantum computing to create software capable of leveraging the potential of qubits to solve problems unapproachable by classical computing.

**Neuro-Interface Designer**

will design brain-computer interfaces and develop devices capable of interpreting neural signals to control external technologies.

**Deep Learning Infrastructure Engineer**

will build an infrastructure capable of supporting advanced deep learning models.

# 01. Human-AI Integration Specialist

By 2035, the adoption of artificial intelligence will be integrally embedded in both society and organizations. The role of the Human-AI Integration Specialist will emerge from the need to effectively integrate AI systems with talent, ensuring optimal human-AI collaboration.

The evolution of the application areas of artificial intelligence will reach its fullest expression with interactive, fluid, and productive collaboration of human intelligence. The Human-AI Integration Specialist will be responsible for ensuring that AI systems are designed and implemented in ways that complement human skills and enhance team dynamics.

The emergence of this role will respond to the growing complexity of AI systems and their potential impact on the workforce. It will reflect a shift in focus from merely developing AI technologies to understanding and managing the relationship between humans and AI in the workplace. This role will be crucial for creating a harmonious work environment where AI and humans can leverage each other's strengths.

Job Description & Skills

## Human-AI Integration Specialist

The Human-AI Integration Specialist will focus on the convergence of artificial intelligence and human psychology to create a symbiotic relationship that exponentially fosters creativity and productivity.

### Responsibilities

- **Development of integration strategies:** Develop strategies for integrating AI systems into human teams, ensuring that AI tools enhance work processes.
- **Design of collaborative systems:** Design AI systems that are intuitive and easy to use for employees, facilitating smooth interaction and collaboration.
- **Training in human-AI interaction:** Train both AI systems and talent to interact effectively with each other.
- **Assessment of ethical and social impact:** Assess the ethical and social implications of integrating AI in the workplace, ensuring that its deployment respects dignity and ethics in work environments.
- **Feedback and continuous improvement:** Collect feedback from human-AI interactions and make continuous improvements in integration strategies and AI systems.

### Tech Background

1. Deep knowledge of AI technologies and their application in operations.
2. Understanding of human psychology and team dynamics.
3. Skills in AI programming and human-centered design.
4. Familiarity with ethical guidelines and best practices in AI implementation.

How will they generate value?

The Human-AI Integration Specialist will play a key role in shaping the future of work, ensuring that AI systems are integrated in a way that benefits both businesses and employees.

## Impact on Business

1. **Improved team efficiency:** By ensuring that AI systems and workers complement each other's strengths, companies will achieve greater efficiency and productivity.
2. **Innovative problem-solving:** Collaboration between diverse human perspectives and AI's analytical capabilities will lead to more innovative solutions to complex problems.
3. **Employee satisfaction and retention:** Properly integrated AI systems can make work more appealing to employees, leading to higher job satisfaction and retention.
4. **Ethical and responsible use of AI:** Ensuring ethical integration of AI will help companies avoid potential issues related to privacy, bias, and worker displacement.

## Challenges

- Overcoming employee resistance and fear regarding AI integration.
- Balancing AI capabilities with human skills and emotional intelligence.
- Addressing ethical concerns in collaboration with AI.

## Which Companies Will Need This Profile?

- Companies implementing AI technologies in their operations.
- Projects requiring seamless collaboration between AI systems and people.
- Organizations aspiring to lead in the ethical and responsible deployment of AI.

# 02. Quantum Security Analyst

With the advent of quantum computing, the cybersecurity landscape will undergo profound changes due to its immense processing power. The role of the Quantum Security Analyst will address the need for advanced security measures capable of withstanding quantum computing's potential to decrypt existing encryption methods.

As organizations begin to adopt quantum computing, data security will become a paramount concern. Quantum computers can decrypt a vast amount of encryption protocols, leaving sensitive data vulnerable. The Quantum Security Analyst is tasked with developing cryptographic methods resistant to quantum computing and analyzing security systems to identify vulnerabilities that could be exploited by these techniques.

Job Description & Skills

## Quantum Security Analyst

The Quantum Security Analyst will specialize in the convergence of quantum computing and cybersecurity, focusing on both the threats and opportunities these technologies present.

### Responsibilities

- **Quantum threat analysis:** Identifying and analyzing potential security threats posed by quantum computing to existing cryptographic systems.
- **Development of quantum-resistant cryptography:** Researching and developing new algorithms that can protect data against the immense processing power of quantum computers.
- **Security system audits:** Conducting regular audits of security systems and encryption methods, identifying vulnerabilities, and recommending updates or replacements.
- **Collaboration with quantum computing experts:** Working closely with quantum scientists and engineers to understand the capabilities and limitations of this technology within the realm of cybersecurity.
- **Training and awareness:** Educating cybersecurity professionals and stakeholders on the potential impacts of quantum computing on security by providing training on new quantum security practices and protocols.

### Tech Background

1. Deep knowledge of quantum computing principles and their application to cybersecurity.
2. Experience with cryptographic techniques and emerging algorithms resistant to quantum technology.
3. Skills to conduct thorough security audits and vulnerability assessments.
4. Familiarity with programming languages used in quantum computing, such as Q# or Qiskit.

How will they generate value?

The Quantum Security Analyst will be crucial in preparing organizations for the security challenges and opportunities of the quantum era.

## Impact on Business

1. **Future-proof security systems:** By developing and implementing quantum-resistant cryptographic methods, companies will be able to protect their data against future quantum attacks, ensuring long-term data security.
2. **Maintaining data privacy and integrity:** In a world where data breaches can have significant consequences, quantum security practices will be essential for maintaining the privacy and integrity of confidential information.
3. **Competitive advantage:** Organizations that adopt quantum security measures from the outset will have a key advantage, as they will be perceived as more secure and forward-thinking by customers and partners.
4. **Securely leveraging quantum computing:** It will enable organizations to safely explore and adopt quantum computing technologies by ensuring their security infrastructures can withstand potential threats.

## Challenges

- Transitioning from traditional cryptographic methods to quantum-resistant alternatives.
- Staying ahead of the rapid evolution of quantum computing technologies and their implications for cybersecurity.
- Balancing the implementation of robust security measures with operational efficiency and user experience.

## Which Companies Will Need This Profile?

- Companies handling sensitive data.
- Projects involving the adoption of quantum computing technologies and the need to secure these systems.
- Organizations looking to establish cybersecurity leadership by proactively addressing the challenges posed by quantum computing.

# 03. Autonomous Systems Ethicist

Within a decade, the Autonomous Systems Ethicist is expected to become a fundamental role in organizations, specifically in industries leveraging autonomous technologies. This role emerges from the increasing deployment of autonomous systems, from self-driving vehicles to robotic assistants. While these systems offer efficiency and innovation, they also raise complex ethical issues and challenges.

The development and implementation of autonomous systems involve decisions that were traditionally in the human domain, such as navigating moral dilemmas or making decisions in complex environments. The Autonomous Systems Ethicist will be tasked with ensuring that these technologies are developed and deployed in a manner that adheres to ethical principles and social norms.

This role is a response to public concern about the ethical implications of autonomous technologies, including issues of privacy, security, and the potential impact on employment. Autonomous Systems Ethicists will play a key role in guiding organizations through the ethics of automation, ensuring that technology serves in a positive and responsible manner.

Job Description & Skills

## Autonomous Systems Ethicist

The Autonomous Systems Ethicist will specialize in the ethical aspects of designing, implementing, and managing autonomous systems.

### Responsibilities

- **Development of ethical framework:** Creation of guidelines and ethical frameworks for the development and use of autonomous systems, considering a wide range of ethical issues, including fairness, accountability, transparency, and privacy.
- **Ethical impact assessment:** Conducting assessments to evaluate the ethical implications of deploying autonomous systems, identifying potential risks and unintended consequences.
- **Policy formulation and advocacy:** Developing policies related to the ethical use of autonomous systems, advocating for these policies within organizations and across the industry.
- **Stakeholder engagement:** Collaborating with engineers, designers, policymakers, and other stakeholders to ensure that ethical considerations are integrated throughout the lifecycle of autonomous systems.
- **Training and education:** Educating employees, management, and external partners on ethical issues related to autonomous technologies.

### Tech Background

1. Understanding of autonomous technologies and their applications.
2. Knowledge of ethical theories and principles and their application in technology.
3. Skills in policy development and ethical analysis.
4. Ability to communicate complex ethical concepts clearly and effectively.

How will they generate value?

The Autonomous Systems Ethicist will be crucial for navigating the ethical complexities associated with autonomous technologies, balancing innovation with moral responsibility.

## Impact on Business

1. **Risk mitigation:** By proactively addressing ethical concerns, companies can mitigate risks associated with the implementation of autonomous systems, including legal risks, reputation damage, and public backlash.
2. **Building trust:** Demonstrating a commitment to ethical practices in the development and use of autonomous systems will generate trust among customers, partners, and regulators, enhancing the company's reputation.
3. **Guiding innovation:** Ethical frameworks can guide the development of autonomous technologies in a direction that is not only innovative but also socially responsible and beneficial.
4. **Regulatory compliance:** As regulations evolve around autonomous systems, the Autonomous Systems Ethicist will ensure that organizations remain compliant with the law.

## Challenges

- Addressing the ethical dilemmas inherent in autonomous decision-making.
- Ensuring transparency and accountability in systems operating with a high degreeof autonomy.
- Balancing technological advancement with social norms and values.

## Which Companies Will Need This Profile?

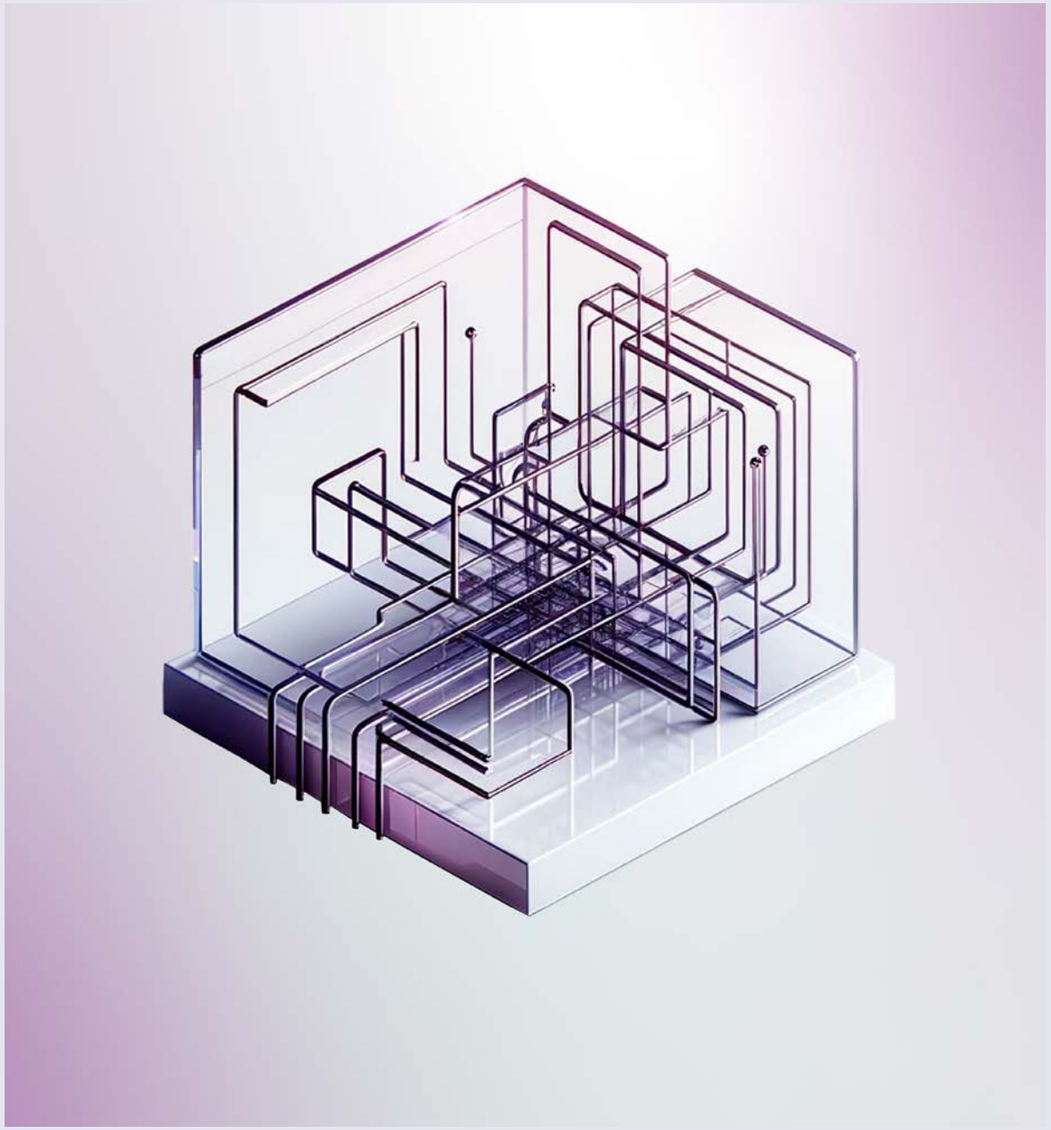
- Industries heavily using autonomous systems.
- Projects involving the development and deployment of autonomous technologies, where ethical considerations are paramount.
- Organizations looking to lead in the ethical deployment of technology and wanting to set industry standards for ethical practices.

# 04. Advanced AI Algorithm Developer

By 2035, the Advanced AI Algorithm Developer will be at the forefront of artificial intelligence, driving innovations that push the boundaries of what AI can achieve. This role emerges from the continuous evolution of AI technology, moving from traditional machine learning to more sophisticated and complex algorithms capable of reasoning, learning, and solving advanced problems.

The evolution of AI encompasses areas such as deep learning and neural networks, venturing into uncharted territories of AI capabilities. These advancements will enable AI to tackle more complex tasks, make more nuanced decisions, and provide deeper insights. The role of the Advanced AI Algorithm Developer will be to lead these developments, creating algorithms that are not only powerful but also ethical, transparent, and aligned with social values.

This role is crucial in industries where the potential of AI has not yet been fully tapped, such as personalized medicine, autonomous systems, or advanced robotics. Developers in this field are expected to navigate complex challenges, including ethical considerations, algorithmic bias, and the integration of AI in dynamic environments.



Job Description & Skills

## Advanced AI Algorithm Developer

The Advanced AI Algorithm Developer will specialize in creating sophisticated AI algorithms that can solve complex problems and perform tasks with a high degree of autonomy and accuracy.

### Responsibilities

- **Development of algorithms:** Design and develop advanced AI algorithms to create solutions that can mimic human cognition and reasoning.
- **Problem-solving and innovation:** Apply AI algorithms to solve complex problems. This requires not just technical skills but also creativity and an understanding of the challenges and requirements of different industries.
- **Ethical AI design:** Ensure that AI algorithms are developed ethically and responsibly, guaranteeing that AI decisions are transparent and ethical.
- **Collaboration with multidisciplinary teams:** Work closely with data scientists and engineers to ensure that AI algorithms are well integrated and aligned with specific project or organizational goals.
- **Continuous learning and research:** Stay up-to-date with the latest advancements in AI research and technologies, continuously learning and adapting to new methodologies and tools.

### Tech Background

1. Experience with advanced AI technologies and machine learning frameworks, such as TensorFlow and PyTorch.
2. Programming skills in languages like Python, R, and Java.
3. Deep understanding of the mathematical and statistical models underpinning AI algorithms.
4. Skills in data analysis, data modeling, and algorithm optimization.

How will they generate value?

The Advanced AI Algorithm Developer will play a crucial role in leveraging the full potential of AI to drive innovation and growth.

### Impact on Business

1. **Boost to innovation:** By developing advanced AI algorithms, companies will be able to explore new opportunities, create innovative products and services, and redefine their operational models.
2. **Improved decision-making:** Advanced AI algorithms will be able to analyze complex data sets to provide insights that serve as a basis for better decision-making, from strategic planning to customer insights.
3. **Operational efficiency:** The implementation of sophisticated AI solutions will be able to automate complex tasks, optimize processes, and improve overall operational efficiency.
4. **Competitive advantage:** Companies at the forefront of AI algorithm development will gain a significant competitive edge as they can offer more advanced and effective solutions than their competitors.

### Challenges

- Navigating the complexities of developing cutting-edge AI algorithms that are both powerful and ethical.
- Ensuring that advanced AI solutions are accessible, understandable, and beneficial for a wide range of users.
- Integrating advanced AI algorithms into business environments.

### Which Companies Will Need This Profile?

- Industries requiring complex problem-solving capabilities.
- Projects involving large-scale data analysis, predictive modeling, and AI-driven innovation.
- Companies aspiring to be at the forefront of AI technology seeking to leverage its transformative power.

# 05. AI Behavioral Adaptation Specialist

By 2035, the AI Behavioral Adaptation Specialist is expected to become a key role in the field of artificial intelligence, focusing on the dynamic interaction between AI systems and human and environmental contexts. As AI systems become increasingly integrated into everyday life and business operations, the need for these systems to adapt and respond to complex and changing behaviors and environments will become essential.

The AI Behavioral Adaptation Specialist will emerge in response to the need to move beyond static AI programming, enabling AI systems to learn, adapt, and respond in real-time to human behavior and environmental changes. This role will combine knowledge of AI, psychology, and data analysis to ensure that AI systems can intelligently and sensitively interact in various contexts, from personal assistants to industrial automation.

The role of this specialist will be crucial to ensuring that AI systems are not only technically competent but also context-aware and responsive, providing personalized experiences and interactions that are ethical, effective, and aligned with social needs and values.

Job Description & Skills

## AI Behavioral Adaptation Specialist

The AI Behavioral Adaptation Specialist will be tasked with developing AI systems that can appropriately adapt and respond to human behavior and environmental changes.

### Responsibilities

- **Behavior modeling:** Developing models that enable AI systems to understand and adapt to human behavior using machine learning techniques and behavioral sciences to create systems capable of interpreting and responding to people's emotions, preferences, and actions.
- **Contextual adaptation:** Ensuring AI systems can adapt their responses based on the context, whether interacting with people or operating in a changing environment.
- **Learning and continuous improvement:** Implementing machine learning algorithms that allow AI systems to learn from interactions and experiences, continuously improving their adaptability and response.
- **Ethical and responsible AI design:** Balancing AI capabilities with ethical considerations, ensuring AI systems respect privacy, avoid biases, and operate within ethical boundaries.
- **Interdisciplinary collaboration:** Working with experts from different fields, such as psychology, data science, and user experience, to develop efficient AI systems.

### Tech Background

1. High knowledge of artificial intelligence technologies and machine learning, especially in areas related to behavioral analysis.
2. Understanding of psychology and human behavior studies.
3. Proficiency in programming languages and frameworks used in AI development, such as Python, TensorFlow, or PyTorch.
4. Skills in data analysis and interpretation to understand and enhance AI system interactions.

How will they generate value?

The AI Behavioral Adaptation Specialist will be vital in shaping AI systems to be intuitive, sensitive, and beneficial for users and businesses.

### Impact on Business

1. **Enhanced user experience:** By developing AI systems that adapt to individual behaviors and preferences, companies will be able to provide more personalized and satisfying experiences to their customers.
2. **Improved efficiency and accuracy:** Adaptive AI systems will be able to perform tasks more efficiently and accurately by understanding and responding to changes in real-time, leading to better outcomes in various applications.
3. **Generating trust in AI:** AI systems that respond and adapt to human behavior will foster greater trust and acceptance among users, crucial for the widespread adoption of AI technologies.
4. **Ethical and socially responsible AI:** Ensuring that AI systems behave ethically and responsibly in various contexts will be vital to mitigating risks associated with AI implementation.

### Challenges

- Developing AI systems that can accurately interpret and adapt to complex human behaviors and changing environments.
- Balancing AI's technical capabilities with ethical considerations and human-centered design.
- Keeping AI systems updated and relevant in a rapidly changing social and technological landscape.

### Which Companies Will Need This Profile?

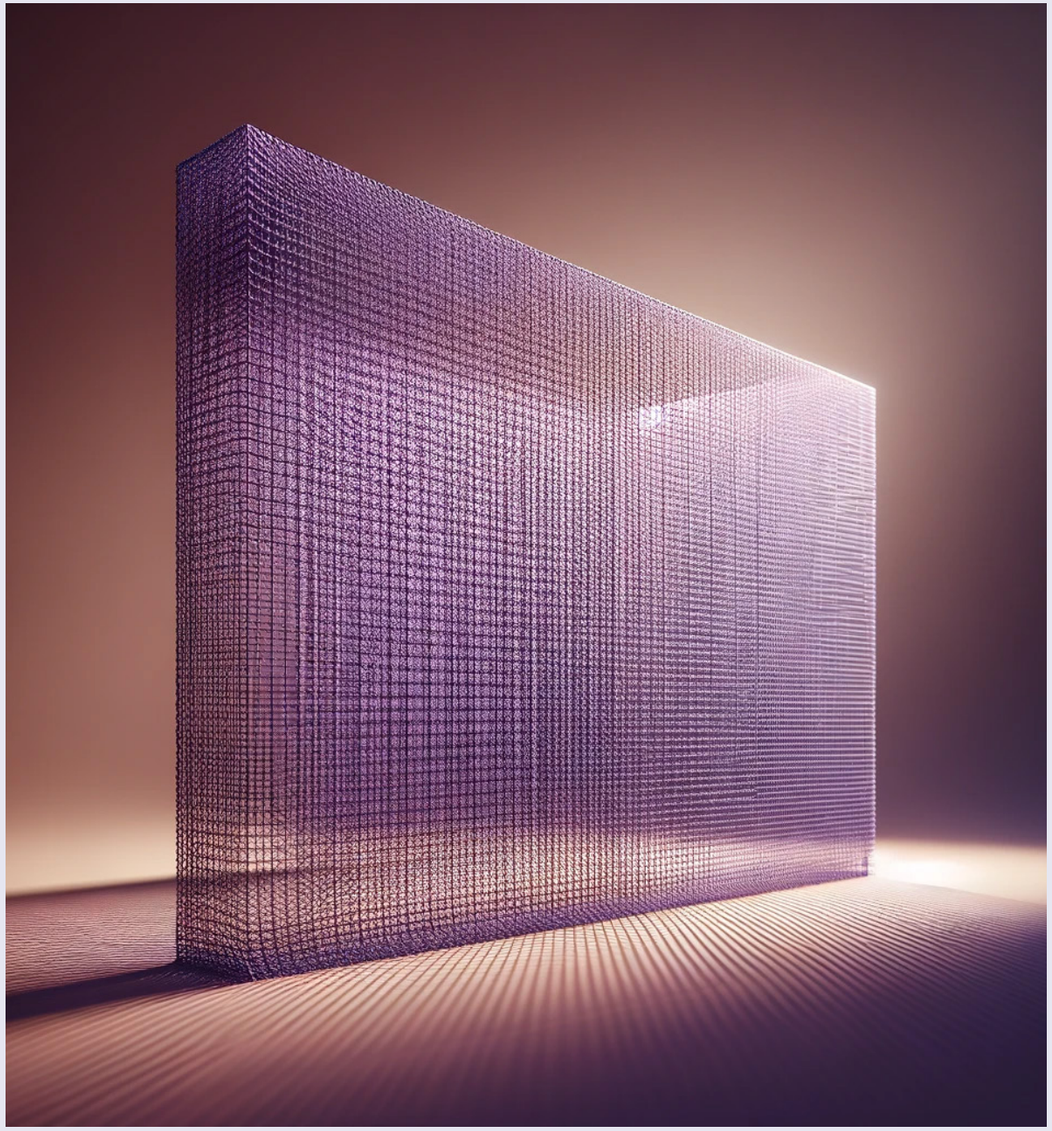
- Consumer-oriented sectors companies, such as retail, entertainment, and customer service, where personalized AI interactions can enhance customer engagement.
- Organizations using AI for complex decision-making processes, where adaptability and contextual knowledge will be key.
- Companies across various sectors seeking to implement AI solutions that are ethical, user-friendly, and responsive to human needs.

# 06. Autonomous Network Administrator

By 2035, the role of the Autonomous Network Administrator is expected to become increasingly important and will be driven by the evolution of network infrastructure towards greater autonomy. It will emerge in response to the growing complexity of network systems, the proliferation of IoT devices, and the need for networks that self-organize, self-repair, and are capable of making real-time decisions.

As networks become more complex and critical to operations, the traditional model of network management, which requires significant human intervention, will become less feasible. Autonomous Network Administrators will be tasked with overseeing networks that use AI and machine learning to automate various tasks, from traffic management to security. This role will be crucial in ensuring that these autonomous networks operate efficiently, securely, and aligned with the organization's needs.

The emergence of this role signifies a shift from reactive network management to a proactive and predictive approach, where network issues are anticipated and resolved before they impact business operations. Autonomous Network Administrators will play a fundamental role in maintaining the integrity and performance of these advanced network systems.



Job Description & Skills

## Autonomous Network Administrator

The Autonomous Network Administrator will specialize in managing complex and self-regulated network systems that leverage AI and machine learning to achieve operational efficiency.

### Responsibilities

- **Supervision of autonomous networks**: Monitor the operation of autonomous networks, ensuring they function optimally, efficiently, and securely.
- **Integration of AI and machine learning:** Implement and manage AI and machine learning algorithms within network systems to automate tasks such as traffic management, load balancing, and security threat detection.
- **Problem-solving and maintenance:** Proactively identify and address network issues using predictive analysis to ensure the network remains resilient to disruptions and cyber threats.
- **Policy management and compliance:** Ensure network operations comply with regulatory requirements and organizational policies, especially regarding data privacy and security.
- **Innovation and updates:** Stay up-to-date with the latest developments in network technology, implementing new features and updates to enhance network capabilities and performance.

### Tech Background

1. Mastery of network management software and AI-driven network tools.
2. Skills in AI and machine learning, particularly those applied to network optimization and security.
3. Understanding of cybersecurity principles and best practices.
4. Familiarity with IoT technologies and the challenges of managing large distributed networks.

How will they generate value?

The Autonomous Network Administrator will be essential for optimizing network operations and ensuring robust performance in increasingly complex network environments.

### Impact on Business

1. **Improved network efficiency:** Autonomous networks managed by skilled administrators will be able to adapt to changing demands, ensuring optimal performance and efficiency.
2. **Reduced downtime:** Proactive network management and self-repair capabilities will significantly reduce downtime, minimizing business impact.
3. **Enhanced security posture:** With AI-driven security measures, autonomous networks will be better equipped to identify and mitigate security threats.
4. **Operational cost savings:** The automation of network management tasks will lead to a reduction in operational costs and resource requirements.

### Challenges

- Managing the complexity and scale of network infrastructures.
- Ensuring network security against evolving cyber threats.
- Balancing automation with the need for human oversight in network management.

### Which Companies Will Need This Profile?

- Companies with extensive network infrastructure, particularly those in telecommunications, IT services, and large corporations with complex network needs.
- Organizations leveraging IoT and cloud technologies for advanced network management solutions.
- Companies looking to improve network resilience, efficiency, and security through cutting-edge technologies.

# 07. Cognitive Systems Personalizer

By 2035, the Cognitive Systems Personalizer is anticipated to become a key player in the field of artificial intelligence, specifically in enhancing user experience through personalization. As AI systems become increasingly integrated into daily life and business operations, the need for them to understand and adapt to individual users' preferences, behaviors, and cognitive styles will become increasingly important.

The emergence of this role will be driven by advancements in cognitive computing, machine learning, and user experience design. The Cognitive Systems Personalizer will align AI's technical capabilities with human-centered design, ensuring that AI systems are not only intelligent but also intuitive and responsive to individual users' needs.

This role will be crucial in creating AI systems that can offer personalized experiences, understand human emotions and behaviors, and adjust their functionalities accordingly. It's about moving beyond one-size-fits-all solutions to create AI interactions that are as unique as the users themselves, thereby enhancing engagement, satisfaction, and the overall user experience.

Job Description & Skills

## Cognitive Systems Personalizer

The Cognitive Systems Personalizer will specialize in tailoring AI systems to individual users' preferences, behaviors, and cognitive processes.

### Responsibilities

- **User behavior analysis:** Using machine learning algorithms to identify patterns and insights that allow understanding of individual preferences, behaviors, and needs and generating efficient personalization strategies.
- **Development of personalization algorithms**: Enabling AI systems to adapt their responses and functionalities based on specific user data essential in personalizing content or recommendations.
- **User-centered system design:** Designing AI systems focused on the user experience, ensuring they are intuitive, engaging, and meet user requirements.
- **Ethical data use and privacy:** Ensuring personalization strategies respect user privacy and ethical standards, including transparency in how user data are used and stored.
- **Continuous improvement and adaptation:** Implementing feedback mechanisms to continually improve AI systems' personalization aspects, ensuring they evolve with users' needs and preferences.

### Tech Background

1. Experience in machine learning, data analysis, and cognitive computing.
2. Skills in user experience design and human-computer interaction.
3. Knowledge of ethical standards and privacy regulations in AI.
4. Proficiency in programming languages and tools used in AI development and personalization algorithms.

How will they generate value?

The Cognitive Systems Personalizer will play a crucial role in bridging AI technology with human-centered design, enhancing user experience and engagement.

## Impact on Business

1. **Enhanced user engagement:** Personalized AI systems will significantly improve user engagement and satisfaction, leading to increased user commitment.
2. **Data-driven insights:** By analyzing user behavior, the Cognitive Systems Personalizer will provide valuable insights into user needs and preferences, aiding in business strategy design and product development evolution.
3. **Competitive advantage:** Satisfying users' specific needs and preferences will differentiate a company's offerings from generic solutions.
4. **Ethical and responsible use of AI:** Ensuring ethical and responsible use of user data in personalization strategies, helping to build trust and maintain compliance with privacy regulations.

## Challenges

- Developing AI systems that can precisely and ethically personalize user experiences.
- Balancing personalization with user privacy and data security.
- Adapting AI systems to users' preferences and behaviors.

## Which Companies Will Need This Profile?

- Consumer-focused industries where personalized user experiences will be key.
- Projects involving AI systems that directly interact with users, requiring a deep understanding of human behavior.
- Organizations looking to improve user engagement and satisfaction through personalized experiences powered by AI.

# 08. Advanced Quantum Software Developer

By 2035, a new frontier in software development is expected to be reached, driven by the maturation of quantum computing technology. In this scenario, the figure of the Advanced Quantum Software Developer will emerge to leverage the power of quantum computing in the development of new products and services.

The Advanced Quantum Software Developer will specialize in developing software for quantum computers. The challenges of quantum programming, such as managing quantum bits (qubits) and quantum algorithms, will be significantly different and more complex than those in traditional software development.

This role will require not only a deep understanding of quantum mechanics but also the ability to translate that knowledge into practical software applications.

Job Description & Skills

## Advanced Quantum Software Developer

The Advanced Quantum Software Developer will be at the forefront of software development, creating applications that leverage the unique capabilities of quantum computers.

### Responsibilities

- **Development of quantum algorithms:** Designed specifically for quantum computers to solve complex problems more efficiently than classical algorithms.
- **Software for quantum systems:** Creating software that can run on quantum computers, including tools for quantum simulation applications, optimization, and machine learning.
- **Integration with classical systems:** Ensuring quantum software can seamlessly integrate with classical computing systems by developing interfaces and protocols that allow quantum and classical systems to work together effectively.
- **Problem-solving and innovation**: Applying quantum software to solve complex problems in various fields, from cryptography to materials science, offering solutions that were unreachable with classical computing.
- **Research and development:** Staying abreast of the latest developments in quantum computing and continuously refining and updating quantum software to leverage new advances and techniques.

### Tech Background

1. Deep knowledge of quantum mechanics and the principles of quantum computing.
2. Proficiency in programming languages used in quantum computing, such as Q# or Qiskit.
3. Experience in classical software development and understanding of how quantum computing complements classical approaches.
4. Ability to think creatively and solve complex problems.

How will they generate value?

The Advanced Quantum Software Developer will be crucial in unlocking the transformative potential of quantum computing for businesses and research institutions.

### Impact on Business

1. **Solving previously impossible problems:** Quantum software will tackle problems that currently have no solution on classical computers, opening new possibilities.
2. **Enhancing data security: I**n cryptography, quantum software will offer the possibility of unbreakable encryption, significantly improving data security.
3. **Accelerating research and development:** Quantum computing will dramatically speed up research in fields such as pharmaceuticals or materials science.
4. **Competitive advantage in innovation:** Organizations that effectively leverage quantum software will gain a significant competitive edge by being at the forefront of this technological revolution.

### Challenges

- Developing practical and efficient quantum algorithms for real-world applications.
- Bridging the gap between theoretical quantum computing and practical software solutions.
- Integrating quantum computing into existing technological ecosystems.

### Which Companies Will Need This Profile?

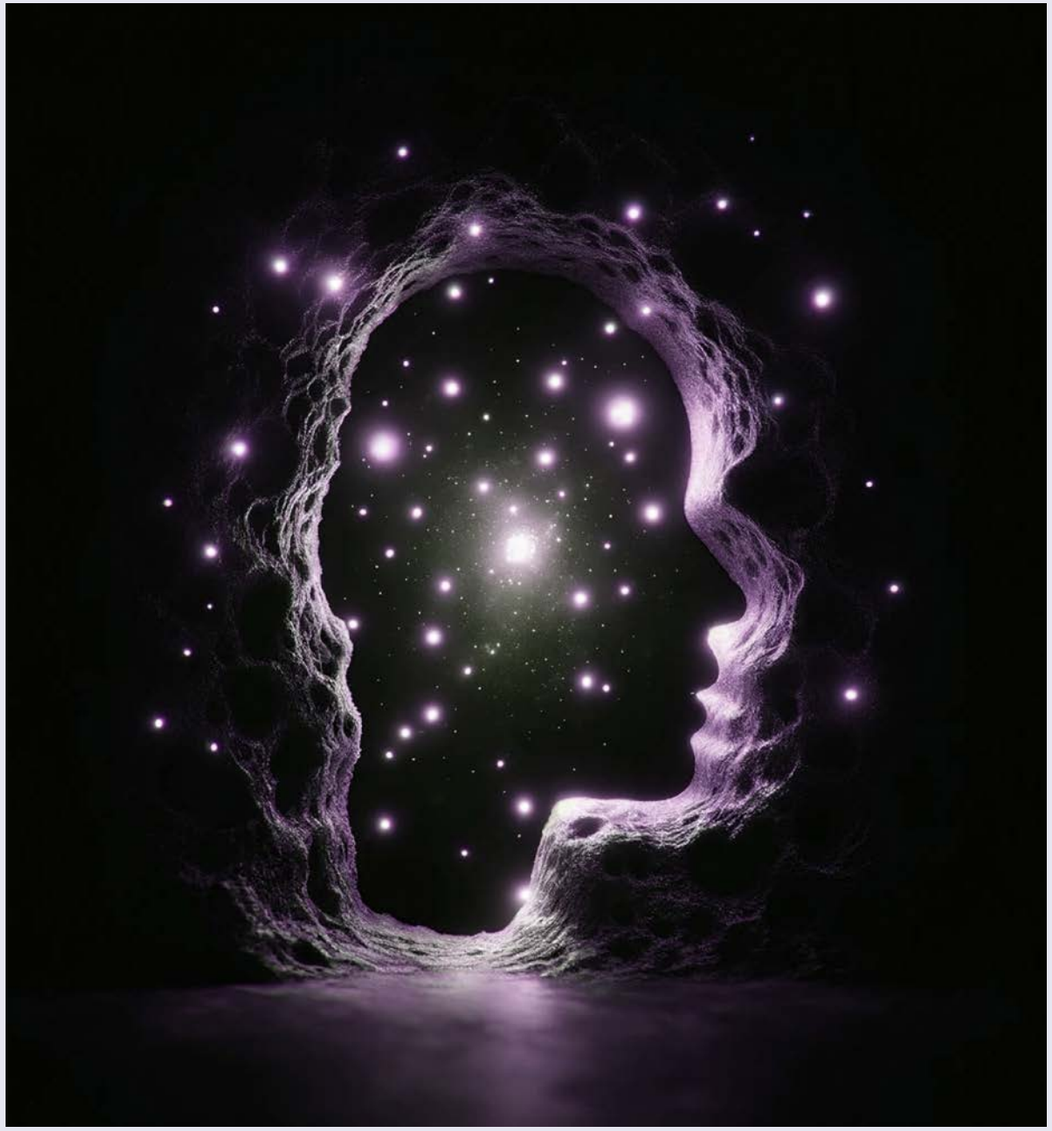
- Industries and sectors where solving complex problems is crucial.
- Research institutions and technology companies investing in the development of quantum computing capabilities.
- Organizations looking to enhance the security of their data and encryption methods through quantum cryptography.

# 09. Neuro-Interface Designer

The Neuro-Interface Designer will play a key role in the convergence between neuroscience and technology for the next decade. This role will emerge from advances in understanding the human brain and the development of technologies capable of directly interacting with neuronal activity. Neuro-interfaces connecting the human brain with external devices will have the potential to revolutionize areas such as healthcare, communication, and computing.

The Neuro-Interface Designer will specialize in creating systems and devices that can seamlessly interact with the human nervous system. These interfaces will range from medical devices that aid in cognitive or sensory disabilities to advanced communication tools or even direct brain-computer connections. This role will require a deep understanding of both neurological processes and technological design, ensuring that neuro-interfaces are effective, safe, and easy to use.

The emergence of this role will be driven by the potential of neuro-interfaces to transform how we interact with technology, offering innovative solutions, including assistive technologies or augmented reality. Neuro-Interface Designers will face the challenge of turning what was once science fiction into reality, all while navigating the ethical and practical challenges inherent in this field.



Job Description & Skills

## Neuro-Interface Designer

The Neuro-Interface Designer will focus on creating systems and devices that can effectively and safely interact with the human nervous system.

### Responsibilities

- **Design and development of neuro-interfaces:** Creating devices and systems that can accurately interpret and respond to neuronal signals.
- **User-centered design:** Ensuring that neuro-interfaces are designed with the user experience in mind, making them accessible, intuitive, and comfortable to use.
- **Integration with technology:** Developing ways to integrate neuro-interfaces with other technologies, such as computers, mobile devices, or virtual/augmented reality systems.
- **Testing and validation:** Conducting rigorous testing of neuro-interfaces to ensure their safety and effectiveness.
- **Ethical and regulatory compliance:** Addressing ethical considerations related to neuro-interfaces, such as privacy and consent, and ensuring compliance with associated medical and technological regulations.

### Tech Background

1. Knowledge of neuroscience, particularly in areas related to brain-computer interfaces.
2. Skills in biomedical engineering, electronic design, and user experience design.
3. Familiarity with programming languages and tools used in the development of neuro-interfaces.
4. Understanding of ethical guidelines and regulatory standards in medical devices and neurotechnological devices.

How will they generate value?

The Neuro-Interface Designer will be crucial in creating technologies that redefine the boundaries of human-technology interaction.

## Impact on Business

1. **Innovative solutions in healthcare:** Neuro-interfaces will provide innovative solutions in healthcare, such as restoring sensory or motor functions, offering significant improvements in patient care and quality of life.
2. **Advances in communication:** The development of interfaces allowing direct brain-to-brain or brain-to-computer communication could revolutionize how we interact with each other and with technology.
3. **Enhanced user experiences:** In the realm of augmented and virtual reality, neuro-interfaces could create more immersive and intuitive experiences, expanding the capabilities of these technologies.
4. **Development of ethical and safe technology:** By focusing on ethical design and regulatory compliance, Neuro-Interface Designers will ensure that these advanced technologies are developed responsibly and safely.

## Challenges

- Designing neuro-interfaces that are precise, reliable, and easy to use.
- Ensuring the safety and ethical use of technologies that directly interact with the brain.
- Integrating neuro-interfaces with a wide range of technologies and applications.

## Which Companies Will Need This Profile?

- Healthcare companies and medical research institutions focusing on assistive technologies and neurological therapies.
- Technology companies exploring advanced communication tools and augmented/virtual reality experiences.
- Organizations dedicated to the ethical and innovative development of technologies, especially in fields intersecting with neuroscience.

# 10. Deep Learning Infrastructure Engineer

By 2035, the Deep Learning Infrastructure Engineer will emerge out of the necessity to design, implement, and manage the infrastructure required to support advanced deep learning models. These models are becoming increasingly complex, processing vast amounts of data for tasks ranging from autonomous vehicle navigation to medical diagnostics.

The role of the Deep Learning Infrastructure Engineer will be crucial to ensure that the underlying systems and platforms are capable of handling the intensive computational demands of deep learning. As AI continues to evolve, the computational power, data storage, and energy efficiency required for deep learning models will become more critical.

This role must be at the forefront of developing infrastructure that is not only powerful but also scalable, efficient, and sustainable.

The emergence of this function will reflect the growing importance of AI across various sectors and the need for specialized knowledge in building and maintaining the infrastructure upon which AI systems depend.

Job Description & Skills

## Deep Learning Infrastructure Engineer

The Deep Learning Infrastructure Engineer will specialize in the development and management of the infrastructure necessary to support deep learning applications.

### Responsibilities

- **Design and development of infrastructure:** From selecting the right hardware, such as GPUs and TPUs, to setting up networks to handle large-scale data processing.
- **Performance optimization:** Continuous monitoring and optimization of deep learning systems' performance, improving computational efficiency, managing data throughput, and ensuring systems are resilient and reliable.
- **Collaboration with AI teams:** Working closely with AI researchers and developers to understand their computational needs and ensuring the infrastructure aligns with these requirements.
- **Sustainability and scalability:** Focusing on creating sustainable and scalable deep learning infrastructure, considering factors like energy efficiency and the ability to scale as computational needs grow.
- **Innovation and research:** Keeping up-to-date with the latest developments in deep learning technologies and infrastructure, continuously exploring new ways to enhance system performance and efficiency.

### Tech Background

1. Experience with deep learning hardware and software, including knowledge of GPUs, TPUs, and relevant frameworks like TensorFlow and PyTorch.
2. Skills in network architecture, data storage solutions, and cloud computing platforms.
3. Understanding of parallel computing and distributed systems.
4. Familiarity with best practices in sustainable and efficient computing.

How will they generate value?

The Deep Learning Infrastructure Engineer will be essential for enabling organizations to harness the full potential of deep learning technologies.

## Impact on Business

1. **Enhancing AI capabilities:** A robust infrastructure will allow companies to develop and deploy more advanced AI models, leading to better analyses, predictions, and automated processes.
2. **Driving innovation:** With the support of an efficient deep learning infrastructure, businesses will be able to push the boundaries of AI research and application, generating innovative products and solutions.
3. **Operational efficiency:** Optimized deep learning infrastructure will lead to more agile model training and deployment, improving overall operational efficiency and reducing time to market.
4. **Sustainability in AI operations:** Focusing on energy-efficient infrastructure will help reduce the environmental impact of large-scale AI operations, aligning with sustainability goals.

## Challenges

- Addressing the increasing computational demands of advanced deep learning models.
- Balancing the need for high-performance computing with energy efficiency and sustainability.
- Ensuring the scalability and reliability of the deep learning infrastructure.

## Which Companies Will Need This Profile?

- Tech companies and research institutions dedicated to advanced AI and deep learning research.
- Sectors where deep learning drives innovation and efficiency.
- Organizations looking to scale their AI capabilities while maintaining sustainability and operational efficiency.

# Conclusions

We find ourselves in one of the most disruptive moments, where accelerated evolution is generating constant technological changes that directly affect the global market and the people transforming it.

It is time to imagine, dream, reflect, and redesign the world; the present and future talent has the power and responsibility to create a scenario in which society and organizations advance for mutual benefit.

In our commitment to this vision and after analyzing our forecast for the next decade, we have identified the following key points for talent to maximize its potential and that of technology:

- **Taking innovation to the next level:** Collaboration between human intelligence and artificial intelligence, or the nearly limitless capabilities of quantum computing, will offer the possibility to solve problems or answer questions that humanity has not yet asked. Technology will open up a world of infinite possibilities for talent.

- **Promoting interdisciplinary collaboration:** The technological challenges of the future will require collaboration across various disciplines to enrich the process of innovation and development.

- **Building with a focus on ethics and social responsibility:** The growing integration of artificial intelligence in all aspects of life will make it essential for developers to consider not only the regulatory framework but also the ethical implications to avoid potential negative impacts on society.

- **Living in the future, preparing in the present:** Staying up-to-date with all technologies is already basic for anyone working in technology, but the real engine of innovation is the creative capacity to dream about the future and work on the strategic, tactical, and technological development of that dream.

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