





# Al and Automation: Crafting Careers in the Age of Financial Technology



he integration of artificial intelligence (AI) and automation into financial technology (FinTech) is radically altering the sector's employment landscape. With AI and automation technologies driving efficiency and innovation, there is a significant shift in the skill sets required and the types of careers available.

This whitepaper explores how these technologies are shaping career paths in FinTech, highlighting emerging roles, necessary skills, and future trends. Overall, the aim is to equip professionals and organizations with the insights needed to thrive in this transformative period.

### The Rise of AI and Automation in FinTech

### **Overview of AI and Automation Impact**

Financial technology has been significantly enhanced by the adoption of AI and automation, affecting everything from customer service and compliance to fraud prevention and decision-making in investments.

According to a report by the World

Economic Forum (2020), AI is set to become a cornerstone in banking with an estimated 85% of banks reporting implementation of AI strategies by 2025.

Likewise, automation in financial services is not just a trend but a substantial economic driver, with Accenture predicting that AI could double annual economic growth rates in 2035 by changing the nature of work and creating a new relationship between man and machine.

### Key Areas Transformed by AI

- Banking services: Al has revamped customer interactions through chatbots and personalized banking services, with over 76% of banks attributing enhanced customer satisfaction to Al, per a Salesforce survey.
- Investment strategies: Automation tools have enabled high-frequency trading and robo-advisors, which manage billions in assets. For instance, algorithms now execute nearly 50% of all trades globally, according to J.P. Morgan. Because of this, it's expected for future employees in the FinTech sector



Risk management and compliance:
 Al-driven analytics enhances the ability to identify and mitigate risks before they become critical, improving compliance with regulations and reducing fraudrelated losses by up to 30%, as reported by McKinsey. Hence, companies are increasingly on the look to fortify their

### Implications for Career Landscapes

risk assessment departments.

While it's undeniable that financial products and services have been enhanced by AI, the impact of this tech revolution on careers has been a tad bit murkier, to say the least.

#### **Shifts in Job Roles and Descriptions**

The introduction of AI and automation in FinTech has led to a profound shift in the workforce, particularly affecting roles traditionally centered around repetitive and routine tasks. For example, PwC forecasts that 30% of jobs in the financial sector could be at risk by the mid-2030s due to automation.

However, this shift also fosters the creation of new roles that require advanced digital skills, such as AI specialists, data analysts, and cybersecurity experts. These roles often demand a deep understanding of technology along with strategic thinking and problem-solving abilities, skills that

weren't as heavily emphasized in traditional financial roles.

### **Emerging Career Opportunities**

With the rise of AI, there has been a surge in demand for professionals who can bridge the gap between technical AI solutions and business applications.

Roles such as AI business development managers, AI product managers, and customer experience experts who understand AI are becoming more prevalent. Likewise, LinkedIn's 2020 Emerging Jobs Report highlights a 74% annual increase in hiring for AI practitioners, with AI specialties among the fastest-growing job categories.

#### Skills Gap Analysis

The rapid deployment of AI in financial services has highlighted a significant skills gap. A report by Deloitte suggests that 86% of financial services CEOs are concerned about the availability of key skills with AI proficiency topping the list of desired capabilities.

As Al continues to evolve, ongoing education and training will be critical. Financial institutions are increasingly investing in training programs to reskill their workforce, aiming to equip employees with a blend of technical, analytical, and soft skills essential for the Al-driven market.





### Navigating New Career Paths in FinTech

Dystopian predictions and fears of automation have somewhat overshadowed the incredible potential that AI has provided young professionals with. The road is certainly rocky,

### **Education and Training**

To capitalize on the opportunities AI and automation bring, professionals must seek a blend of formal education and practical experience. Universities and colleges are rapidly developing curricula that cater to the needs of the FinTech sector, emphasizing data science, AI programming, and machine learning, alongside traditional financial courses. For instance, MIT and Stanford offer specialized programs that combine AI, machine learning, and economics, designed to prepare students for careers in technology-driven financial services.

### Role of Internships and Apprenticeships Internships and apprenticeships play a pivotal role in shaping future FinTech

professionals. These programs provide essential on-the-job training that allows aspiring FinTech workers to apply theoretical knowledge in real-world scenarios, working directly with Al technologies.

Companies like Goldman Sachs and Citibank are already offering internships that focus on AI and data analytics, giving students firsthand experience in the field.

### Continuous Learning and Career Development

In the rapidly evolving sector of FinTech, continuous learning is crucial. Many professionals turn to online platforms such as Coursera, Udemy, or LinkedIn Learning to keep pace with new AI advancements and methodologies.

Additionally, certifications in AI and data analysis can significantly enhance a professional's credentials and job prospects. For example, the Certified Analytics Professional (CAP) and TensorFlow Developer Certificate are recognized across the industry and help signify a professional's competence in specific AI skills.



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### **Challenges and Considerations**

The deployment of AI in FinTech raises significant ethical questions, particularly regarding data privacy, security, and the potential for bias in algorithmic decision-making. Bias in AI can lead to unfair treatment of customers and skewed financial advice.

For example, a study by the University of California, Berkeley, found that algorithms used in lending applications were less likely to approve loans to minority applicants. To address these concerns, financial institutions are increasingly adopting ethical AI frameworks and conducting regular audits to ensure AI fairness and transparency.

#### **Addressing Job Displacement Concerns**

As Al automates routine tasks, there is a growing concern about job displacement. The World Economic Forum estimates that while Al will displace approximately 85 million jobs globally by 2025, it will also create 97 million new roles in sectors like Al and data analysis. Financial institutions and governments must collaborate to develop strategies for workforce transition, including retraining programs and social safety nets, to support those displaced by automation.

### Regulatory Landscape and Its Influence on AI Implementation

The regulatory environment for AI in FinTech is rapidly evolving, with implications for how technologies are developed and used. Regulations such as the EU's General Data Protection Regulation (GDPR) impose strict guidelines on data handling and user consent, directly affecting AI deployments that rely on large data sets. Compliance requires robust mechanisms for data management and transparency, prompting financial institutions to invest heavily in regulatory technology (RegTech) to keep pace with these requirements.

### The Future Outlook

As AI and automation continue to advance, the next decade in FinTech is poised for groundbreaking developments. Experts predict that AI will lead to more sophisticated predictive analytics, enhanced cybersecurity measures, and further personalization of financial services.

Moreover, as quantum computing becomes more accessible, its integration with AI could lead to unprecedented processing capabilities, opening new frontiers in financial modeling and real-time decision-making.

#### **Potential Breakthroughs and Innovations**

The ongoing innovation in AI technology is expected to introduce new tools that will further redefine FinTech.

For instance, next-generation AI could enable real-time fraud detection systems that adapt to new threats instantaneously, or AI-driven platforms that automatically adjust financial portfolios in response to global economic changes.

#### Strategies for Professionals and Companies

To stay competitive in this fast-evolving field, professionals should focus on developing both technical and soft skills, maintaining a proactive approach to continuous learning.

Companies, on the other hand, need to invest in AI research and development while fostering an ethical AI culture to navigate future challenges responsibly.

### Conclusion

This whitepaper has explored the transformative impact of AI and automation on the FinTech industry, illustrating both the opportunities and challenges these technologies present. As AI continues to reshape financial services, it is imperative for both professionals and organizations to adapt strategically to thrive in this new era. Embracing change, fostering innovation, and prioritizing ethical considerations will be key to success in the burgeoning field of AI-driven FinTech.





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