Concepts of FinTechs and Artificial Intelligence

Course Description

There has been an unprecedented level of advancement in technology during the last two decades, which has impacted all segments of the economy. In particular, this advancement has caused a revolution in the financial services industry. Incumbent financial institutions lag in innovative solutions to changing customer needs and are facing a great deal of competition as well as collaboration opportunities from an army of FinTech and AI-based start-ups. In Europe, these start-ups emerged due to open banking regulations, and neobanks are challenging established banks’ bricks-and-mortar business models. The COVID-19 pandemic has further accelerated the growth of FinTech companies that offer agile, transparent, efficient, cost-effective, and innovative solutions to tech-savvy customers in areas such as cross-border payments, online purchases, wealth management, and lending, just to mention a few. Thus, FinTechs are transforming financial institutions using technologies such as AI, data analytics, and blockchain. Through this course, students will gain a comprehensive overview of FinTech and AI, and learn about the FinTech ecosystem, open banking regulation in Europe, contemporary developments in banking technologies, and the practical application of FinTech and AI. This course aims to critically discuss the contemporary issues related to FinTech and AI, such as regulatory reforms, creativity and innovation challenges, customer data protection, ethical issues, and green tech financing. Students will also discuss the future of applications of FinTech and AI in banking and finance and critically evaluate the evolution of cryptocurrencies and central bank digital currencies. The course also provides students with an opportunity to debate and discuss how large tech companies are shaping the finance world, what lessons can be learned from past crises, the future of branch banking, and what impact FinTech and AI start-ups can have on financing ESG and sustainable projects.

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   1. Definition of FinTech and AI
   2. FinTech Ecosystem
   3. Revolution in the Financial Services Industry
   4. Open Banking Regulation
2. Application of FinTech in Banking and Finance
   1. Retail Banking
   2. Payment Transactions
   3. Wealth Management
   4. Financing
   5. Scope of FinTech in Financial Inclusion
3. FinTech and AI Underlying Technologies
   1. Contemporary Developments in Banking Technology
   2. Cloud Banking
   3. Blockchain, DLT, and Smart Contracts
   4. Machine and Deep Learning
   5. Neuroscience in Finance
4. AI Application in the Financial Services industry
   1. AI in Deposits and Lending
   2. Chatbots in Banking
   3. AI Use in Developing Credit Scoring Models
   4. AI in the Insurance Sector
   5. KYC and AML
5. Trust and Ethical Issues Related to AI and FinTech
   1. Bias and AI Algorithmic Discrimination
   2. GDPR Directive in Europe
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6. Future of FinTech and AI
   1. Building Trust from Past Events
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8. Future of Banking Technology
9. Role of FinTech and AI Start-Ups in Sustainable and ESG Financing
10. Future of Banking, Cryptocurrencies, and CBDCs