



DIGITAL INNOVATION AND TRANSFORMATION | DIT-024

Building AI Financial Chatbot

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Course content

Why Attend

Artificial intelligence is transforming how financial institutions and finance departments interact with customers, employees, and financial information. AI-powered chatbots are increasingly used to answer financial enquiries, support banking services, explain financial products, assist with transaction-related requests, and provide access to financial information through natural language conversations.

Traditional financial service channels often face challenges involving high enquiry volumes, repetitive customer requests, inconsistent responses, limited service availability, and increasing operational costs. AI financial chatbots offer opportunities to improve service accessibility, automate routine interactions, and deliver more responsive financial support.

Course Methodology

- The programme combines instructor-led discussions, practical AI development demonstrations, chatbot architecture workshops, conversational design exercises, financial data integration activities, and application testing simulations.
- Participants work with realistic financial service scenarios involving account enquiries, payment information, financial product explanations, budgeting support, transaction categorisation, and internal financial knowledge retrieval.
- Hands-on activities introduce the use of Python, conversational AI APIs, structured prompts, retrieval-augmented generation, and simple chatbot interfaces. Participants also examine how to integrate approved financial information sources and develop secure application workflows.
- The programme follows a progressive development approach, beginning with chatbot requirements and architecture before moving into implementation, integration, testing, and deployment planning.
- Participants are encouraged to use synthetic or appropriately anonymised financial data during practical exercises.

Course Objectives

- Explain the principles and applications of AI chatbots in banking and financial services
- Identify suitable financial chatbot use cases and business requirements

Course content

- Understand the architecture of large language model-based conversational applications
- Design effective financial chatbot conversation flows and user interactions
- Develop structured prompts for accurate financial information assistance
- Build a basic AI chatbot using Python and conversational AI APIs

Target Audience

- This course is suitable for:
- Banking digital transformation professionals
- Financial technology developers and specialists
- Artificial intelligence and machine learning practitioners

Course outline

Detailed course outline

Day-by-day outline for Building AI Financial Chatbot.

Day 1 - AI Financial Chatbot Fundamentals and Solution Architecture

- 09:00-09:34 | Understanding the role of conversational AI in banking, financial services, accounting, customer support, and financial information management
- 09:34-10:08 | Comparing traditional rule-based chatbots with large language model-based conversational systems and hybrid chatbot architectures
- 10:08-10:42 | Identifying financial chatbot use cases, including account information assistance, transaction enquiries, financial product explanations, budgeting support, and internal finance knowledge services
- 10:42-11:00 | Defining chatbot business requirements, intended users, permitted functions, service boundaries, and measurable success criteria
- 11:00-11:30 | Coffee break
- 11:30-11:46 | Defining chatbot business requirements, intended users, permitted functions, service boundaries, and measurable success criteria (continued)
- 11:46-12:53 | Exploring chatbot architecture components, including user interfaces, language models, application backends, knowledge sources, APIs, and security controls
- 12:53-14:00 | Practical workshop: Designing a financial chatbot solution blueprint covering use cases, user journeys, functional requirements, architecture, and information security considerations

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Day 2 - Conversational Design, Prompt Engineering and Chatbot Development

- 09:00-09:49 | Understanding conversational design principles, user intent recognition, dialogue management, context handling, and effective financial service interactions
- 09:49-10:38 | Developing system instructions and prompt templates that define chatbot responsibilities, response formats, limitations, and escalation conditions
- 10:38-11:00 | Introducing Python-based chatbot development and the use of conversational AI APIs for generating and managing responses
- 11:00-11:30 | Coffee break
- 11:30-11:33 | Introducing Python-based chatbot development and the use of conversational AI APIs for generating and managing responses (continued)
- 11:33-12:22 | Building conversational workflows that handle financial questions, follow-up requests, clarification, and structured information presentation
- 12:22-13:11 | Implementing response formatting, input validation, error handling, and safeguards against unsupported financial claims
- 13:11-14:00 | Hands-on development workshop: Building a basic AI financial chatbot that responds to defined financial enquiries using structured prompts and a simple conversational interface

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Day 3 - Financial Knowledge Integration, RAG and API Connectivity

- 09:00-09:39 | Understanding retrieval-augmented generation and its role in improving the factual grounding of financial chatbot responses
- 09:39-10:18 | Preparing financial knowledge sources, including product information, policy documents, frequently asked questions, financial terminology, and service procedures
- 10:18-10:57 | Exploring document processing, text segmentation, embeddings, vector search, and retrieval methods for financial knowledge systems
- 10:57-11:00 | Integrating retrieved financial information into chatbot responses while preserving source references, contextual relevance, and information accuracy
- 11:00-11:30 | Coffee break
- 11:30-12:05 | Integrating retrieved financial information into chatbot responses while preserving source references, contextual relevance, and information accuracy (continued)
- 12:05-12:43 | Understanding API integration with financial applications, including approved account information services, transaction systems, and financial data platforms
- 12:43-14:00 | Practical workshop: Enhancing a financial chatbot with a controlled financial knowledge base and a simulated API connection to retrieve authorised financial information

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Day 4 - Financial Data Security, Compliance and Chatbot Quality Assurance

- 09:00-09:34 | Identifying security and privacy risks involving personal financial information, account data, payment details, credentials, and confidential business records
- 09:34-10:08 | Applying authentication, authorisation, role-based access, encryption, secure API handling, and data minimisation principles
- 10:08-10:42 | Understanding relevant financial services considerations involving customer protection, data privacy, financial crime controls, and jurisdiction-specific regulatory obligations
- 10:42-11:00 | Addressing chatbot risks such as hallucinations, prompt injection, misleading financial guidance, unauthorised actions, and inappropriate disclosure of information
- 11:00-11:30 | Coffee break
- 11:30-11:46 | Addressing chatbot risks such as hallucinations, prompt injection, misleading financial guidance, unauthorised actions, and inappropriate disclosure of information (continued)
- 11:46-12:53 | Developing chatbot testing procedures covering functional correctness, financial response accuracy, security, user experience, and exceptional situations
- 12:53-14:00 | Case study: Testing a financial chatbot against simulated customer enquiries, incorrect financial information, unauthorised access attempts, and scenarios requiring human escalation

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Day 5 - Financial Chatbot Deployment, Performance Monitoring and Continuous Improvement

- 09:00-09:30 | Understanding deployment options for financial chatbots across websites, mobile banking applications, internal portals, and customer service platforms
- 09:30-10:00 | Establishing operational monitoring frameworks covering response accuracy, conversation completion, containment rates, escalation frequency, latency, and user satisfaction
- 10:00-10:30 | Evaluating model usage, token consumption, infrastructure requirements, operating costs, and scalability considerations
- 10:30-11:00 | Designing human-in-the-loop processes for sensitive financial enquiries, complaints, transaction disputes, and situations requiring regulated professional judgement
- 11:00-11:30 | Coffee break
- 11:30-12:00 | Designing human-in-the-loop processes for sensitive financial enquiries, complaints, transaction disputes, and situations requiring regulated professional judgement (continued)
- 12:00-13:00 | Developing a financial chatbot implementation roadmap covering pilot testing, stakeholder approval, security validation, deployment, staff training, and continuous improvement
- 13:00-14:00 | Capstone exercise: Developing and presenting a Functional AI Financial Chatbot Prototype incorporating conversational design, financial knowledge retrieval, secure data integration concepts, response validation, user safeguards, performance indicators, and a deployment roadmap

Seminar dates

Available seminar dates

Live dates and pricing for Building AI Financial Chatbot generated from the course details page.

Date	Location	Format	Fee
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No seminar dates are currently available.