

Department of Computer Technology
Value Added Course – Details
Academic Year: 2023-24

Programme Code:	B.Sc	Programme Title:	Bachelor of Science (Computer Technology)	
Course Code:	22UCT4VA	Title	Batch:	-
		Value Added Course: An Introduction to AI CHATBOT Framework	Semester	II/IV/VI
Hrs/Week:	2	Total Hours :30hrs	Credits:	02

Course Objective

The course imparts a sound learning of how artificial intelligence powers ChatBot, get an overview of the Bot ecosystem and Bot anatomy, and study different types of bots and use cases. Identify best practices for defining a ChatBot use case and use a rapid prototyping framework to develop a use case for a personalized ChatBot.

Course Outcomes (CO)

K1	CO1	To understand in-depth of conversation design, including onboarding, flows, utterances, entities, and personality
K2	CO2	To realize the scope of the different approaches used to develop ChatBots
K3	CO3	To analyzing the processes from demonstrate, test, and iterate a fully-functional, interactive ChatBot using a commercial platform.
K4	CO4	To analysis and evaluate the data received through demonstrate how NLP is used in developing ChatBot and Design a ChatBot for public use and interaction.

Syllabus

Unit-I

[10Hours]

Introduction: Benefits from Chatbots for a Business, A Customer-Centric Approach in Financial Services, Conversational ChatBot Landscape. **Identifying the Sources of Data:** ChatBot Conversations, Training ChatBot for Conversations, Personal Data in ChatBot, and Introduction to the General Data Protection Regulation (GDPR).

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Unit-II

[10Hours]

ChatBot Development Essentials: ChatBot Development Approaches, Rules-Based Approach, AI-Based Approach, Conversational Flow, Key Terms in ChatBot, Utterance, Intent, Entity, Channel, Human Takeover, Use Case: 24x7 Insurance Agent.

UNIT– III

[10Hours]

Building a ChatBot Solution: Business Considerations, ChatBot Vs Apps, Growth of Messenger Applications, Direct Contact Vs Chat, Success Metrics, Customer Satisfaction Index, Completion Rate, Bounce Rate, Generic Solution Architecture for Private ChatBot.

Natural Language Processing, Understanding, and Generation: ChatBot Architecture, Popular Open Source NLP and NLU Tools.

Powerpoint Presentations, Seminar, Quiz, and Assignment.
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Books for Study

1. Abhishek Singh, Karthik Ramasubramanian, Shrey Shivam, “Building an Enterprise Chatbot: Work with Protected Enterprise Data Using Open-Source Frameworks”, ISBN 978-1-4842-5034-1, Apress, 2019.

Books for Reference

1. James D. H. Janarthnam and Srinivasan, Hands-on chatbots and conversational UI development: Build chatbots and voice user interfaces with C (1 ed.), Packt Publishing Ltd, 2017. ISBN 97817882946693.
2. Galitsky, Boris., Developing Enterprise Chatbots (1 ed.), Springer International Publishing, 2019. ISBN 978-303004298
3. Kelly III, John E. and Steve Hamm, Smart machines: IBM's Watson and the era of cognitive computing (1 ed.), Columbia University Press, 2013. ISBN 978-0231168564.

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Reference Links

1. <https://www.coursera.org/learn/building-ai-powered-chatbots>
2. <https://www.udemy.com/course/landbot-designing-conversation-building-chatbot/>
3. <https://www.edx.org/learn/chatbots/ibm-ai-chatbots-without-programming>
4. <https://futureskillsprime.in/course/ai-chatbots-without-programming>
5. <https://in.skillup.online/courses/AI-chatbots-without-programming/>
6. <https://www.youtube.com/watch?v=oxYrHbsPPEU>




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