# Introduction to Chatbot Design and Development

## Learning Objectives:

By the end of this session, students will be able to:

1. Understand what a chatbot is and its role in business and UX.
2. Identify key components of chatbot functionality.
3. Design a simple chatbot conversation flow.
4. Prototype a chatbot using Jotform or a no-code tool.

# 1. Introduction to Chatbots

What is a chatbot?

- Definition and purpose
- Types: Rule-based vs. AI-powered (NLP-based)

Why are chatbots important?

- Customer service, automation, lead generation
- Examples (e.g., ChatGPT, Apple Siri, Facebook Messenger bots)

An NLP (Natural Language Processing) chatbot is an enchanting software creation that harnesses the power of AI to comprehend and engage with human language, facilitating conversations that flow more naturally and resemble the warmth of human interaction.

A rule-based chatbot operates on a set of predefined rules and responses, like a flowchart, guiding conversations based on user input and pre-programmed logic, making it simple to implement but limited in its ability to handle complex or unexpected queries.

# 2. Key Components of a Chatbot

**User Intent & NLP Basics**

- Understanding user queries
- Intent recognition & entity extraction

**Conversation Design**

- Flowcharting chatbot conversations
- Handling user inputs & errors

**Back-End and Integration Basics**

APIs, databases, and platforms (e.g., Dialogflow, Chatfuel, Landbot)

Chatbots largely follow rules-based dialogues and are limited to answering predefined questions

# 3. Hands-on Activity: Designing a Chatbot Conversation Flow

## Let’s build one -

- Students pick a chatbot use case (e.g., restaurant booking, customer support)
- Map a simple dialogue flow on paper or Miro/Figma

**Decide what you want your chatbot to focus on and where you will obtain your content.**

# 4. Testing & Iteration

User testing best practices

- Role-playing conversations
- Gathering feedback and iterating

Class Discussion (10 min): Ethical Considerations

- Data privacy, bias in AI, user frustration

# 5. Share your chatbot with the class

Review key takeaways

Introduce chatbot-building platforms for future learning (e.g., Google Dialogflow, ChatGPT API)

Try out some other options

# Reflection #2

**Investigate your options for free chatbots and agents. Spend some time with at least one option and tell us about your findings -**

1. **Name & URL**
2. **Was it user friendly?**
3. **Would you recommend?**
4. **What use case did you envision?**