

How ChatBots work:

- 1. Parse user input
- 2. Interpret what it means
- 3. Provide an appropriate response

“Show me **hotels** in **LA** for **tomorrow**.”

Intent
the purpose of the query

Entities
info describing the intent

ChatBot Types

Response Architecture Models

Based on how they generate the response

- 1. **Ruled-Based**
 - **entirely predefined** responses
 - Responses according to a series of rules (decision-tree style)
- 2. **Retrieval-Based**
 - Responses pulled from an existing corpus of dialogs
 - **Predefined responses with the ability to self-learn & improve** their response selection
- 3. **Generative**
 - Formulate their own **original responses**

Initiatives

Based on which side (bot or human) takes the initiative

- 1. **Mixed-initiative**
 - Both human and bot
- 3. **System-initiative**
 - Bot controls the conversation

Conversation Domains

Based on the range of topics that are able to cover

- 1. **Closed-Domain** (dialog agents)
 - **Restricted**, responses with a particular focus
- 2. **Open-Domain** (conversational agents)
 - Capable of exploring a **wide range of topics**

Chatbot Design Terminology

Chatbot **Utterance**

A statement that the user makes to the chatbot. The chatbot attempts to match the utterance to an intent.

Chatbot **Entity**

A value that is parsed from a user utterance and passed for use within the user response.

Chatbot **Intent**

The purpose or category of the user query. The user’s utterance gets matched to a chatbot intent.