3/27/2025 INF1003: Information Systems , Services, and Design

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Introduction to chatbot



What is a chatbot?

- Computer program stimulating and processing human conversations.
- Things you can do with it: ask a question, describe a problem, give it a picture etc...
- Software application or web interface.

History of chatbot

World's First Chatbot

- Developed by MIT Professor Joseph Weizenbaum in the 1960s.
- Called "Eliza" and he meant for it to emulate a psychotherapist.
- Not designed to understand but to mimic human conversations.
- Uses pattern matching (predefined scripts) and substitution rules.
- Created for Turing Test

```
Welcome to
                                    IIII
                                                    AAAAA
                                     II
                                            ZZZ
                                                   ΑΔΑΔΑΔΑ
  Eliza is a mock Rogerian psychotherapist.
  The original program was described by Joseph Weizenbaum in 1966.
  This implementation by Norbert Landsteiner 2005.
ELIZA: Is something troubling you ?
       Men are all alike.
ELIZA: What is the connection, do you suppose?
       They're always bugging us about something or other.
ELIZA: Can you think of a specific example ?
       Well, my boyfriend made me come here.
YOU:
ELIZA: Is it important to you that your boyfriend made you come here ?
       He says I'm depressed much of the time.
ELIZA: I am sorry to hear that you are depressed.
       It's true. I am unhappy.
ELIZA: Can vou explain what made vou unhappy ?
YOU:
```

Websites for Eliza Chatbot

Bot Libre

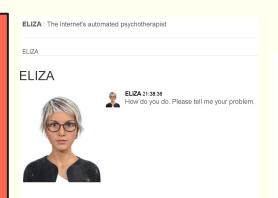
https://eliza.botlibre.com/

New Jersey Institute of Technology

https://web.njit.edu/~ronkowit/eliza.html

Eliza 1966 App

Download app from Google Store







This application aims to honor the work of Joseph Weigenbaum, who created the first chattot, ELIZA, in the 1960s at MIT, and

Following are....

Perry

Stimulation of a person with paranoid schizophrenia

- Made by psychiatrist Kenneth Colby in 1972
- Demonstrate how computer programs exhibit human-like responses, particularly for mental health
- Rule-based and natural language.

Racter

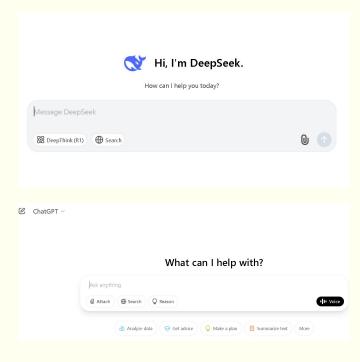
AI computer program simulating a writer

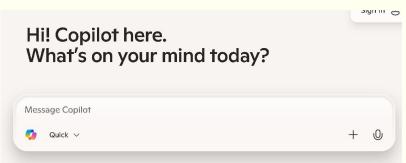
- William Chamberlain and Thomas Etter (1984)
- Created to amuse and entertain users rather to advance research
- Technique:
 "pragmatics-driven text generation"

A.L.I.C.E

Natural Language Processing Chatbot to be as natural as possible

- Richard Wallace (1995).
- Applies some heuristic pattern matching rules to the human's input.
- Engage in a conversation and respond as naturally as possible, to mimic human behaviour/interaction





AI Chatbots

- Created using AI and natural language processing (NLP) by training large-language models (LLM) on large sets of data and code.
- Generate human-like text and engage in conversations.
- Can read documents and pictures because they use OCR (Optical Character Recognition) for text extraction.

Ethical and Legal Implications of AI

At the moment there is only the proposed law for AI regulation, which is Bill C-27 or the Digital Charter Implementation Act.... No comprehensive, solid federal laws



References

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