

# **Chatbots, Machine Learning and AI: embracing our robot overlords**



CodeYQL - October 17, 2016

# What's a chatbot? 🙄

a computer program designed to simulate conversation with human users, especially over the Internet.

# Examples 🙈

# The Evolution of Bots



# ELIZA (1966)

<http://psych.fullerton.edu/mbirnbaum/psych101/Eliza.htm>

- Developed at MIT, ran on IBM 704 mainframe
- Designed to mimic a conversation between a patient and a psychologist

# A.L.I.C.E. (1995)

<http://alice.pandorabots.com/>

- Applied pattern matching heuristics to input
- Could maintain a reasonably cogent conversation

# **IBM Watson (2006)**

- Designed to play Jeopardy! and own Ken Jennings at it
- Closed domain and constrained knowledge base

# **tay.ai (2016)**

- Developed by Microsoft Research in 2016
- Twitter bot, designed to mimic the language patterns of a 19 year-old girl
- "Self-learning", but managed to just mimic deliberately offensive behaviour by Twitter users



# The Turing Test



a test for intelligence in a computer, requiring that a human being should be unable to distinguish the machine from another human being by using the replies to questions put to both

# The Chinese Room Argument

a program cannot give a computer a "mind", "understanding" or "consciousness",[a] regardless of how intelligently or human-like the program may make the computer behave

**Discuss!**

