What is AI

the science of making machines that:

- think rationally ← old way of thinking, has some problem
- think like people ← how it thinks is not really relevant
- act like people ← what matters is the final result
- act rationally modern approach

maximizing your expected utility

What about human brains?

- very good at making rational decisions (not perfect)
- not as modular as software, hard to retro-engineer
- brain ≠ intelligence
- we learned from it that memory (data) and simulation (computation) are the key to decision making

Brief history recap

- 1940-1950: early days
  starting to work to turing test
- 50-70: excitement
  checkers
  1956 the name AI is born
- 70-90: knowledge-based approaches
- 90-2012: statistical approaches + subfield expertise
- 2012-???: excitemen, again
  actually used in the real word

Natural language

speech technologies

- speech recognition
- text to speech
- dialog systems

language processing technologies

- question answering
- machine translation
- web searches
- text classification

Vision

pixels -> decision/info

- face detection/recognition
- semantic scene segmentation
- 3d understanding

Robotics

part mech eng. part AI, reality is much harder than simulations