

CS 5100: Foundations of AI

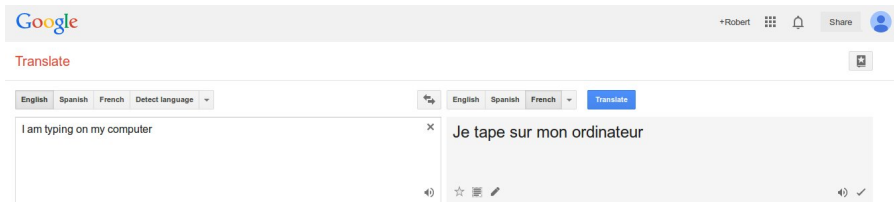
AI Accomplishments

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Machine translation



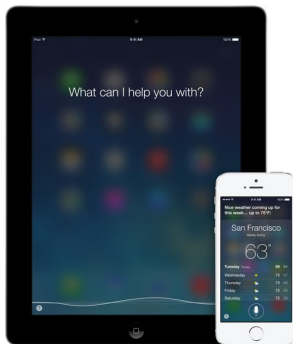
- works pretty well

Speech to text



Siri.
Your wish is
its command.

Siri lets you use your voice to send messages, schedule meetings, place phone calls, and more. Ask Siri to do things just by talking the way you talk. Siri understands what you say, knows what you mean, and even talks back. Siri is so easy to use and does so much, you'll keep finding more and more ways to use it.



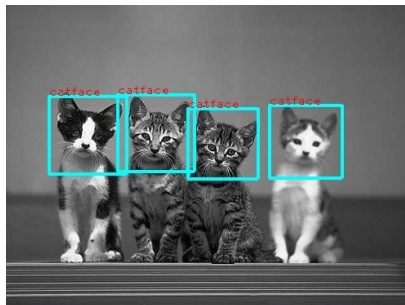
► works kind of well

Question answering



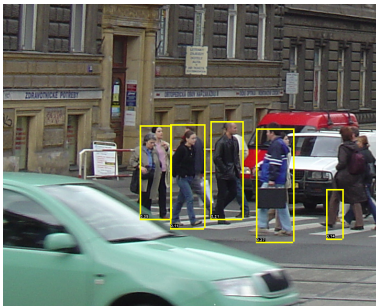
- 2011: beat the human world champions of the day

Face detection



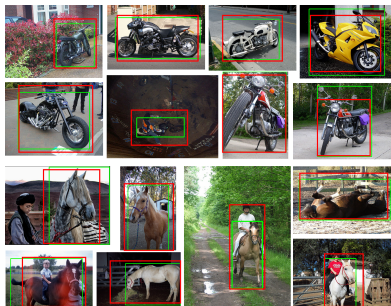
- Face detection used to be a really hard problem. Now, your phone does it...

Person detection



- Person detection used to be a really hard problem...

Object detection



- this used to be hard too...

Stanley



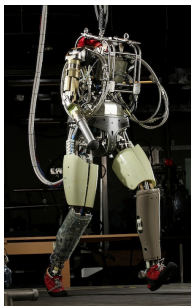
- ▶ won the 2005 DARPA desert grand challenge
- ▶ drove 150 miles on roads in the Mojave desert autonomously
- ▶ key constituent technologies: machine learning, planning, vision, robotics

Google self-driving car



- ▶ currently under development
- ▶ there's a big team at Google working on it right now.
- ▶ will it succeed? who knows!
- ▶ key constituent technologies: machine learning, planning, vision, robotics

BDI Atlas



- ▶ <https://www.youtube.com/watch?v=mclbVTIYG8E>
- ▶ really impressive walking control

Search/Planning



- ▶ 1996, 1997, Deep Blue and Garry Kasparov competed with each winning some games
- ▶ key constituent technologies: adversarial search, machine learning

Other success stories

- ▶ airline routing
- ▶ map route planning
- ▶ medical diagnosis
- ▶ web search
- ▶ spam classification
- ▶ fraud detection
- ▶ ad placement/marketing