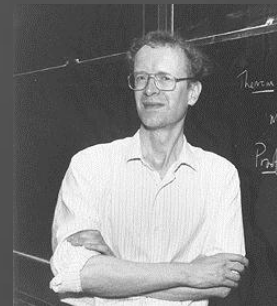
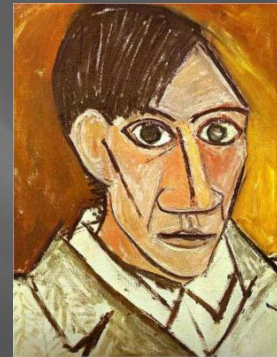


Bear Robotics
Artificial Intelligence, Part 1 ©

Nicholas J. Colella, PhD

Expressions of Human Genius

- ▣ Scientific: Enrico Fermi
- ▣ Athletic: Michael Phelps
- ▣ Artistic: Pablo Picasso
- ▣ Musical/Dramatic: Luciano Pavarotti
- ▣ Mathematical: Andrew Wiles
- ▣ Social: President Barack Obama



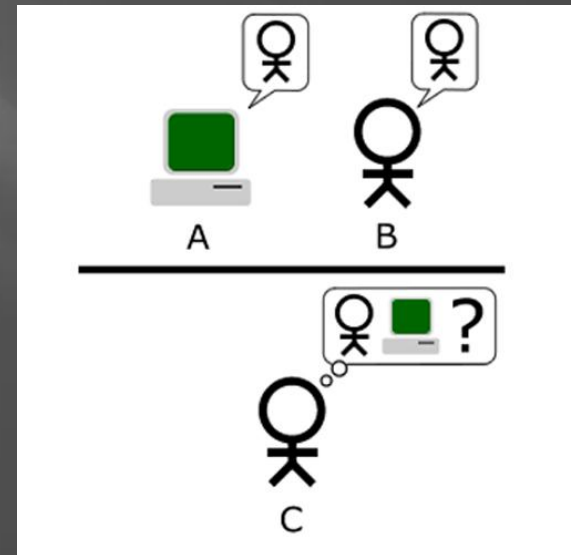
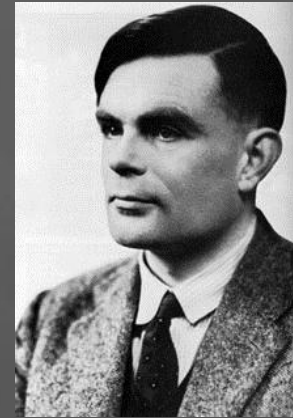
Some Traits of Human Minds

- ▣ Are self-aware and intelligent
- ▣ Grow skills through practice
- ▣ Learn from successes and failures
- ▣ Invent solutions to challenges
- ▣ Relive feelings from memories
- ▣ Experience empathy
- ▣ Imagine new possibilities and opportunities
- ▣ Understand and enjoy humor
- ▣ Aware of mortal existence
- ▣ Dream of transcendence



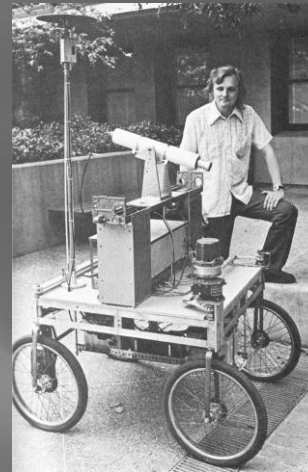
The Turing Test

- ▣ Alan Turing (1912-1954)
 - Cambridge University, England
 - Pioneer of computer science, The Turing Machine (Universal Computer)
- ▣ The Turing Test (paraphrase): Can a human (C) reliably identify another human (B) or a computer pretending to be human (A) by their answers?



Is Artificial Intelligence Emerging?

- ▣ Hans Moravec with the Stanford Cart in 1977
- ▣ World Chess Champion, IBM's Deep Blue in 1997
- ▣ IBM's Watson wins at Jeopardy in 2011
- ▣ Androids in Japan's Research Laboratories
- ▣ Rapidly Expanding Search Engines



Thank You for Listening



References & Links

- ▣ www.turing.org.uk/turing/
- ▣ http://en.wikipedia.org/wiki/Alan_Turing
- ▣ http://www.learner.org/courses/physics/visual/visual.html?shortname=turing_model.

(Participants A and B, a human and a machine, are kept in isolated rooms. They answer questions posed by participant C, who cannot see them. C's task is to determine which is the machine and which is the human, while A and B try to convince C of their humanity. If C cannot tell the difference in human intelligence level between A and B more than half the time, the machine is considered intelligent. So far, no computer has passed the test.)