State of the Art in AI

- Automous Robotics Vehicles:

  - in 2005 Stanford team won DARPA Grand Challenge 132mi race in desert

  - in 2006 CMU team won Urban Challenge; driving in urban environment, obeying rules, avoiding pedestrians, etc. (in closed AFB)

- Speech Recognition:

  - United Airlines system allows caller to book flights

  - France Telecom ARTIMIS uses model of rational communication to interact with callers and provide info about community resources, stocks, etc.

State of the Art in AI

- Automated Planning:

  - NASA Remote Agent controlled a space vehicle

  - NASA Mapgen controls Mars Exploration Rover

  - ESA Mexar 2 controls Mars Express in 2008

- Game Playing:

  - in 90's IBM's Deep Blue beat Chess world champion G. Kasparov; more recent matches won be computers

  - checkers solved, i.e. found optimal strategy

  - 2011: IBM's Watson beats elite human players at Jeopardy

  - in Go, good human players still beat best programs

State of the Art in AI

- Logistics Planning:

  - DART system used in 1991 Gulf war; other systems still in use

- Robotics:

  - Roomba robotics vacuum cleaner

  - Rhino museum guide robot (Germany, Smithsonian)

- Machine Translation: systems in use produce pretty good results

- Spam Fighting: effective use of learning procedures