

91.451, Robotics II  
Spring 2003  
Prof. Yanco

### **Assignment: The Future of Robotics**

Out: Thursday, 27 March 2003

Due: Tuesday, 1 April 2003

In lab on Thursday, 27 March 2003, we watched the movie *A.I.: Artificial Intelligence*. For this assignment, write 3-5 pages discussing some or all of the questions below. You can also write on other related topics. Be sure to spell check and proofread your paper.

- What are the gaps between the robot technology in the movie and the current state of robotics?
- Robots and humans can relate in a number of ways: a robot can be a collaborator with a human, a human can be a supervisor for a robot, or a human can be a bystander to a robot system. Give examples of applications that fit these categories, either from the movie or real life.
- Is it necessary for a robot to have emotions? For what applications would showing emotion be useful?
- Could emotions be implemented on a robot now? How? (Further research: look up Kismet, a project from the MIT AI Lab.)
- In what applications would it be useful for a robot to be able to judge the emotions of a human?
- Do you think that there will be any point at which a machine is mistaken for a human or an animal? If yes, would it be acceptable to turn off such a machine if it asked not to be turned off?