

CSCE 580 Fall 2009

HOMEWORK 1

Assigned Friday, 09/08/21. Due Wednesday, 09/08/26

1. Read Turing's original paper on AI: Alan Turing. "Computational Machinery and Intelligence." *Mind*, 59, 433-460, 1950. List the arguments against artificial intelligence written in section 6 of Turing's paper. (The paper is linked to the course web site.)
2. (Exercise 1.3 [P]) Find out about two applications of AI (not classes of applications, but specific programs). For each application, write at most one typed page that describes it. You should try to cover the following questions:
 - (a) What does the application actually do? (E.g., control a spacecraft, diagnose a photocopier, provide intelligent help for computer users).
 - (b) What AI technologies does it use? (E.g., model-based diagnosis, belief networks, semantic networks, heuristic search, constraint satisfaction).
 - (c) How well does it perform? (According to the authors or to an independent review? How does it compare to humans? How do they know how well it works?)
 - (d) Is it an experimental system or a fielded system? (How many users does it have? What expertise do these users require?)
 - (e) Why is it intelligent? What aspects of it makes it an intelligent system?
 - (f) (optional) What programming language and environment was it written in? What sort of user-interface does it have?
 - (g) References: Where did you get the information about the application? To what books, articles or web pages should others who want to know about the application refer? (The references may extend over a second page).
3. Visit the Zenph Studios web site (www.zenph.com; especially <http://www.pragprog.com/articles/a-pragmatic-project-live-in-concert/the-methodology>). Write a paragraph on whether and how the work described there has a bearing on the statement: playing piano at the level of a master is a task that can currently be solved by computers.