MA/CS 109 Homework Five

Due: Friday 9th, 1pm at beginning of lecture

This homework involves reading the Article “The Doomsday Invention” posted near the bottom of the class web site and providing answers and responses to some of its major points.

Please type your homework -- do not make me decrypt your handwriting!

Problem 1

According to the article, what do the following terms refer to (provide one-sentence answers--you may supplement your reading of the article with Google searches); do not quote the article or Google but give me a sentence of your own summarizing what you found out:

- Transhumanist
- Doomsday Argument
- The Technological Completion Conjecture
- Great Filters
- The “control problem”
- Deep Learning
- Whole Brain Emulations

Problem 2

Bostrom’s imagines three “grand panoramas” that the future of mankind may experience in the distant future. However, these are explained (p.68) early in the article in general terms, without specific reference to the AI scenarios explored later in the article. Explain and reinterpret these scenarios with specific reference to the future of mankind vis a vis Artificial Intelligence. (Answer in a short paragraph.)

Problem 3

The article starts with an extensive section about Bostrom’s ideas about the future of mankind, and then discusses Artificial Intelligence in this context, but without many details (which I asked you to flesh out in the previous problem). It could be argued that Bostrom’s “gut feeling” about the future history of man is fairly negative, and tends towards the second of the grand panoramas. For example, the comments of various AI researchers (basically, “we are so far away from true AI that it is not
worth worrying about”) are not comforting---after Bostrom is talking about a vast scale of time! But perhaps I am giving too much weight to the title and the first section in the overall impact of the article.

What do you think? Is Bostrom basically a pessimist about the future of AI? What is your own opinion, is humanity doomed to be a sparrow raising an owl in its nest?

(Answer in no more than two short paragraphs.)