

## SCIE300 Reading Assignment 4 (RA4)

75 points

### Question 1 (10 points)

Give an overview of what Bostrom means by “AI winter” and brief one-sentence descriptions of any specific AI winters mentioned by Bostrom.

### Question 2 (5 points)

What is Bostrom’s definition of a superintelligence, as given in Chapter 2? Give a direct quotation.

### Question 3 (10 points)

According to Bostrom’s calculations in Chapter 2, how long would it take a supercomputer to simulate a billion years of evolution of a nervous system similar to a human’s?

### Question 4 (10 points)

According to Bostrom, to what extent is whole brain simulation feasible with current computers?

### Question 5 (10 points)

For each of the paths to superintelligence described in Chapter 2, give a one-sentence summary of that path in your own words.

### Question 6 (10 points)

Using your own words, briefly describe each of the forms of superintelligence addressed in Chapter 3.

### Question 7 (10 points)

Define the following concepts from Chapter 4 in your own words (one sentence for each should be adequate): fast takeoff, content overhang, recalcitrance, crossover.

### Question 8 (10 points)

Many people believe that superintelligence is impossible, even in principle. Others believe that superintelligence is possible but unthreatening. Clearly, Bostrom believes superintelligence is possible and presents a threat that we should take seriously. Based on what you have read so far, write approximately 100 words describing your own beliefs about the possibility of superintelligence and the likelihood that it could be threatening.