CS5100

Homework 8 (50 Marks)

Marking Guidelines

Answer the following questions

Question 1: (10 Marks)

How do the potential threats from AI technology compare with those from other computer science technologies, and to bio-, nano-, and nuclear technologies?

Criteria	Marks
Identifies and describes threats posed by AI technology	3
Compares AI threats with threats from other computer science technologies	2
Compares AI threats with those from bio-, nano-, and nuclear technologies	2
Provides clear examples or real-world scenarios	2
Clarity and depth of discussion	1

Question 2: (10 Marks)

Facebook developed software that can recognize and individually identify your friends automatically in photos that you upload. Discuss the privacy issues that this raises.

Criteria	Marks
Accurately describes how Facebook's photo recognition works	2
Identifies and discusses specific privacy issues (consent, surveillance, data usage, etc.)	4
Considers social implications (e.g., normalization, social pressure, misuse)	4

Question 3: (10 Marks)

a) Define the weak and strong AI hypotheses (4 Marks)

b) Which hypothesis does the Turing test experiment address? why? (6 Marks)

Criteria	Marks
Correctly defines the weak AI hypothesis	2
Correctly defines the strong AI hypothesis	2
Correctly identifies which hypothesis the Turing test addresses	2
Provides a clear explanation of why the Turing test addresses that hypothesis	2
Clarity and completeness	2

Question 4: (10 Marks)

Google is able to provide tailored information to you in response to your queries, based on building up a profile of your likes and behavior. Discuss some of the social and ethical issues that this raises.

Criteria	Marks
Clearly describes how Google tailors information (profiling, data collection)	2
Identifies key social issues (e.g., filter bubbles, manipulation, autonomy)	4
Identifies key ethical issues (privacy, consent, fairness, discrimination)	4

Question 5: (10 Marks)

Smart phones contain a GPS, which allows them to determine the user's physical location, and allow programs on the user's phone to have access to that information. What social and ethical issues does this raise?

Criteria	Marks
Explains how GPS data is collected and accessed by apps	2
Identifies main social issues (tracking, stalking, social trust, etc.)	4
Identifies main ethical issues (consent, surveillance, misuse, discrimination)	4