University of Roehampton London

Last updated: 23 Nov 2022 by Yuanlin Gu

Machine Learning

Essay Specification

General Information

Please read the following information carefully before starting your coursework.

- Submission date: **14 Dec 2022 by 23:59 GMT** online via Moodle.
- Contribution: 25% of the total mark.
- Academic misconduct: All submissions will be processed through plagiarism tool. If signs of misconduct are found, all students involved will be contacted to discuss further steps. Please see here for information on academic integrity at the university.
  https://portal.roehampton.ac.uk/information/Pages/Academic-Integrity.aspx.
  Our guiding principle is that academic integrity and honesty are fundamental to the academic work you produce at the University of Roehampton. You are expected to complete coursework which is your own and which is referenced appropriately. The university has in place measures to detect academic dishonesty in all its forms. If you are found to be cheating or attempting to gain an unfair advantage over other students in any way, this is considered academic misconduct and you will be penalised accordingly. Please don't do it. It is not worth it.

Essay Requirement

The topic of the essay is reinforcement learning. To meet the essay requirement, it is suggested to follow the steps below.

Step 1: Choose one machine learning application where reinforcement learning is applied.

Step 2: Investigate at least one real-world case study. You can find information from the following resources. More weight will be given to academic publication references.

- Computer science journal papers
- Computer science conference papers
- Other resources on the internet

Step 3: Summarise your findings into an essay. The essay should be at least 1000 words and include the following sections:

- Background of the machine learning application.
- How reinforcement learning is applied in this application.
- The current challenges or ethical issues.
- Your opinion on how to further improve the current methods/products/techniques.
- References.

[Optional challenge]

Investigate the performances of at least three reinforcement learning techniques on the same application and do a comparative study. Summarise your findings into an extra section ‘comparisons of reinforcement learning techniques’. It is suggested to use some tables and figures to present your work.

Submission Requirement

You should submit your essay in PDF format via Moodle. Please note that Turnitin will be used to check similarities of the report.