Task 3.3: Fuzzy Logic

This document supplies detailed information on Assessment Task 3.3 for this unit.

Key information

- **Due: Monday 17 April 2022 by 8.00 pm (AEST)**
- **You can submit this assignment <u>twice</u>. <u>Please submit the assignment by 10 April to receive the feedback and then resubmit it by 17 April if it's requested.</u>**

Overview:

In week 3, we have explored what fuzzy logic is and an example of a fuzzy system using python is also discussed.

In this task you need to find an application of fuzzy logic in a domain (e.g., how fuzzy technology can be applied to automatic train operation system in transportation domain) and submit a report outlining the application of fuzzy technology in that domain and how it can automate a task.

This will help you to understand how fuzzy logic in different domains works.

To do this assignment, you need to refer to Week3 lecture content.

Submission details to Ontrack:

- **Submit your answers as a PDF file into the Ontrack. Your answers must be relevant and precise.**
- **In your submission you need to prepare a report (in total 800 words) and explain a detailed information of how Fuzzy technology works in the target domain/ application and discuss the flow of the system using fuzzy technology.**
- **To submit the report, you need to cover the following details:**

    1. What is the target domain and application?
    2. You need to explain how the fuzzy logic can be fitted into the target application. You need to discuss the part/parts of the application that is changed using fuzzy system.
    3. You need to provide the flow or pipeline of the system using fuzzy technology.

4. You need to provide the rules that can be extracted from the fuzzy system in the domain/ Application.

Submission details

Deakin University has a strict standard on plagiarism as a part of Academic Integrity. To avoid any issues with plagiarism, students are strongly encouraged to run the similarity check with the Turnitin system, which is available through Unistart. A Similarity score MUST NOT exceed 39% in any case. **No marking on any submission after due date.**

Extension requests

Requests for extensions should be made to Unit/Campus Chairs well in advance of the assessment due date. If you wish to seek an extension for an assignment, you will need to submit a request using the OnTrack system as soon as you become aware that you will have difficulty in meeting the scheduled deadline, but at least 3 days before the due date. When you make your request, you must include appropriate documentation (medical certificate, death notice) and a copy of your draft assignment. Conditions under which an extension will normally be approved include:

Medical To cover medical conditions of a serious nature, e.g., hospitalisation, serious injury or chronic illness. Note: Temporary minor ailments such as headaches, colds and minor gastric upsets are not serious medical conditions and are unlikely to be accepted. However, serious cases of these may be considered.

Compassionate e.g. death of close family member, significant family and relationship problems.

Hardship/Trauma e.g., sudden loss or gain of employment, severe disruption to domestic arrangements, victim of crime. Note: Misreading the timetable, exam anxiety or returning home will not be accepted as grounds for consideration.

Special consideration

You may be eligible for special consideration if circumstances beyond your control prevent you from undertaking or completing an assessment task at the scheduled time. See the following link for advice on the application process: http://www.deakin.edu.au/students/studying/assessment-and-results/special-consideration

Assessment feedback

The results with comments will be released within 5 business days from the due date.

Referencing

You must correctly use the Harvard method in this assessment. See the Deakin referencing guide.

Academic integrity, plagiarism and collusion

Plagiarism and collusion constitute extremely serious breaches of academic integrity. They are forms of cheating, and severe penalties are associated with them, including cancellation of marks for a specific assignment, for a specific unit or even exclusion from the course. If you are ever in doubt about how to properly use and cite a source of information refer to the referencing site above.

Plagiarism occurs when a student passes off as the student's own work, or copies without acknowledgement as to its authorship, the work of any other person or resubmits their own work from a previous assessment task.

Collusion occurs when a student obtains the agreement of another person for a fraudulent purpose, with the intent of obtaining an advantage in submitting an assignment or other work.

Work submitted may be reproduced and/or communicated by the university for the purpose of assuring academic integrity of submissions: https://www.deakin.edu.au/students/study-support/referencing/academic-integrity.