



## Artificial Intelligence (AI) – Cover Sheet

### ASSIGNMENT

#### Instruction:

- Marks will be awarded for good presentation and thoroughness in your approach.
- Referencing Code: If you use some code, or ideas for code, which are taken or adapted from another source (book, magazine, internet, discussion forum, etc), then this **must** be cited and referenced using the APA convention within your source code. Failure to reference code properly is considered as plagiarism.
- Complete this cover sheet and attach it to your project.
- This project is to be attempted by a group of 5 students.

#### Student declaration:

*I declare that:*

- *We understand what is meant by plagiarism.*
- *The implication of plagiarism has been explained to us by our lecturer.*
- *This project is all our work and we have acknowledged any use of the published or unpublished works of other people.*

Group Leader's Signature: .....

Date: .....

Project Title:		Intake:
Role	Name	Signature
Team Leader		
Member		
Member		
Member		
Member		

# Introduction to Artificial Intelligence

**Problem Description:** Expert System+ Chatbot on domain stated by module lecturer.

Human experts can perform at a successful level because they know a lot about their areas of expertise. In Artificial Intelligent an Expert System uses knowledge specific to a problem area to provide “Expert Quality” performance in that application area. Generally, Expert System designers acquire this knowledge with the help of Domain Experts. As with skilled humans, Expert Systems tend to be specialists, focusing on a narrow set of problems. Expert systems are built to solve a wide range of problems in domains such as medicine, mathematics, engineering, chemistry, geology, and education.

You are required to develop a knowledge-based system that serves as an **information repository** and **consultant**. Your system should be equipped with an interactive means to engage in a conversation with the user. This can be achieved by utilizing a Chatbot Tool by your lecturers’ choice.

You are required to choose your Expert System domain and submit a Proposal by week 2 (2) – maximum 10 marks will be awarded in poster format.

The documentation and the approach taken to develop the system are as important as the functionality of the program.

**Note 1:**

You should utilize the controlling and exception handling capabilities of the tool.  
Your system should hold a conversation with user (avoid the usage of Yes/No and multiple-choice option for user to choose)

**Note 2:**

You are expected to define the project scope or theme. Please discuss with your lecturer.

Final system and documentation are **due on 5<sup>th</sup> June 2024**. A recording of the **presentation** of your chatbot will be required **to be submitted to Moodle** on the submission date.

**Performance Criteria**

<b>Grade</b>	<b>Assessment Guidelines</b>
0-39%	Incomplete documentation. System barely addressed the problem domain. Little or no implementation.
40-49%	Barely completed documentation. Minimum compliance to the scope. System functional but discontinuity observed in several instances. System does not engage in a full-fledge conversation with user.
50-64%	Missing sections in documentation. Limitations observed in system. Gaps were evident when recommendations were provided. Knowledge and reasoning lacking in some instances.
64-74%	Evidence of wider understanding. The system provides credible recommendations. Fairly well documented solution. A systematic approach to development and evaluation is used. Fair amount of critical insight and evaluation included.
75% and above	Thorough documentation. Knowledge base system completely addressed the problem domain. Ability to stimulate conversation and engaging in conversation. Evidence of sound understanding. The system provides good recommendations. A systematic approach to development and evaluation is used. Extensive amount of critical insight and evaluation included.

**Your documentation MUST consider the following:****(a) Problem Specification (Documentation)**

- (i) Abstract: 300 words
- (ii) Problem Statement and need for the propose expert system or chatbot with references (each member 1 problem statement)

**(b) Knowledge Acquisition (Documentation) – Chapter 1 (each member min 3 journals – different then group members)**

- (i) Choose a chatbot framework and justify why are you using it. Please include citations and references using APA style.
- (ii) Literature Review on Chatterbot/chatbot - Each member – 3 journal on chatbot.

**(c) Knowledge Representation (Design) – Chapter 2**

- (i) Semantic network

**(d) Implementation (Documentation) - Chapter 3**

- (i) Screen shoot of special features
- (ii) User Acceptance testing in questionnaire – monkey survey or google forms – 5 questions.
- (iii) Results of user acceptance testing in graphs format – 20 people

**(e) Coding Implementation (Implementation – chatbot) – Chapter 4**

- (i) Attach how the special features from chatbot framework is utilised.

**(f) Conclusion (Documentation) – chapter 5**

- (i) Future enhancement of system and improvement with challenges.

**(g) References****(h) Appendices**

- (i) Workload Matrix

**Submission Requirements:**

Your documentation should be submitted in the following form: - only 1 group member upload all the below requirements.

- (i) Pdf of your proposal poster which will be 10 marks (upload into Moodle)
  - (ii) Zip file Executable Version or link of your system (upload into Moodle)
  - (iii) Zip file of the recording of the presentation.
  - (iv) Documentation (uploaded into Moodle)
- (Please make sure the cover sheet is the first page of your documentation as this first page and make sure all members name included)