

# Assignment 1

Start Assignment

- Due 25 Aug by 23:59
- Points 15
- Submitting a file upload

Assignment Name	Comprehensive Project Management Plan for the Innovation Project
Assignment Description	<p>This assignment aims to develop a comprehensive project management plan and prototype design, analyzing the requirements of a machine learning innovation project. This assignment is the first phase of the entire project. Students are expected to acquire the following skills from the assignment:</p> <ul style="list-style-type: none"><li>• <b>Analyzing Project Requirements:</b> Translating project requirements into a structured project management plan, including scope, time, risk, quality, and communication management.</li><li>• <b>Proficiency in Project Management Tools:</b> Gaining hands-on experience in using project management tools to create Work Breakdown Structures (WBS) and Gantt charts.</li><li>• <b>UI/UX Design Principles:</b> Designing and evaluating a prototype interface based on UI/UX design principles to ensure usability and user experience.</li><li>• <b>Integration of Management and Design:</b> Collaborating effectively as a team to integrate project management strategies with design elements, preparing for the subsequent phases of development.</li></ul> <p>Students can choose any of these projects based on their interests and the skills they wish to develop. There are several project topics available for selection:</p> <ol style="list-style-type: none"><li>1. <b>Civil Aviation:</b> Investigate and analyze the factors influencing flight prices or flight delays. Use machine learning techniques for prediction, attribution, or classification to better understand and manage flight prices and delays.</li><li>2. <b>Weather Analysis:</b> Investigate and analyze temperature variations and different weather types. Use machine learning techniques for prediction, attribution, or classification to better understand and respond to weather changes.</li><li>3. <b>Air Quality and Health:</b> Investigate and analyze air quality and its potential impacts on health. Use machine learning techniques for prediction, attribution, or classification to achieve better management of air quality and health risks</li><li>4. <b>Housing Market:</b> Investigate and analyze housing prices and the market performance of different types of houses. Use machine learning techniques for prediction, attribution, or classification to achieve a better understanding and forecasting of housing market dynamics.</li></ol>
Weight	15% of your total marks for the unit

<b>Due Date</b>	Due on Sunday AEST 11:59 pm 25 August 2024 (Week 4)
<b>Submission</b>	Upload the project in .doc or .pdf files via Canvas Assignment Submission.  Turnitin will be used for similarity checking of all submissions.
<b>Late Penalties</b>	10% deduction of the available mark per calendar day or part thereof for up to one week.  Submissions that are late more than 7 calendar days after the due date will receive a mark of zero (0) and no assessment feedback will be provided.

# 1 Project Description

The project description provides an overview of the background and essential requirements for the projects.

This project involves developing a comprehensive machine learning solution that integrates project management, design elements, and technical implementation to address real-world challenges. Students will work in teams to complete the project in three phases: creating a detailed project management plan, implementing a machine learning model, and developing a dynamic website to showcase their results.

The Machine Learning Web Application aims to deliver an interactive platform for users to engage with machine learning models and visualize data insights. The primary goal is to demonstrate practical machine learning applications in real-world scenarios, enhancing user interaction and understanding of the underlying models.

## Core Functional Requirements:

- Select a project topic and find relevant datasets suitable for the chosen topic.
- Investigate and analyze the topic, using machine learning techniques for prediction, attribution, or classification to gain a better understanding and response to the topic.
- Develop a website application that allows users to interact with trained models and provides corresponding responses based on user inputs.
- Include data visualization features to help users understand the dataset.

# 2 Submission

You must submit your assignment via the assignment submission link (i.e., “Assignment 1 Submission”) on the Canvas site by the deadline specified in Section 1 (Due on Sunday AEST 11:59 pm 25 August 2024 (Week 4)).

- No hard copy submission is required for this assignment.
- You are required to submit your assignment as .pdf or .doc files named with your group name. For example, if your group name is “group 1-xxx”, you would submit the files named “group 1-xxx-AssignmentName.pdf”.


- Do not include any unnecessary files in this folder
- Note that marks will be deducted if this requirement is not strictly complied
- No submission is accepted via email.


## 3 Deliverables

Your submission should contain the following files:

**1. Comprehensive Project Management Plan Document:** A detailed document that includes:

- Project background and introduction
- Team introduction
- Project requirement list and description
- Scope Management (Project scope, WBS, WBS Dictionary)
- Time Management (Gantt Chart, development schedule)
- Risk Management (Risk Register and Plan)
- Monitor Control (Changes control)
- Closure plan (criteria for project acceptance)
- Project design
  - front-end prototype, e.g., sketches on paper, hand-drawn sketches on an iPad, and design drawings on a design platform (e.g., Axure, Sketch)
  - explanation of how the design aligns with usability principles

**2. Meeting Minutes:** Students are required to hold at least one meeting each week since the team's inception and submit all meeting minutes, along with other deliverables, as part of the assignment. You can use the attached meeting minutes as they are or as a reference to create your own. [Meeting Minutes Example.docx \(https://swinburne.instructure.com/courses/61567/files/33562316?wrap=1\)](https://swinburne.instructure.com/courses/61567/files/33562316?wrap=1)   
([https://swinburne.instructure.com/courses/61567/files/33562316/download?download\\_frd=1](https://swinburne.instructure.com/courses/61567/files/33562316/download?download_frd=1))

**3. Contribution Form:** A form includes sections for the personal information of each team member, details of the contribution, and other additional information. You can download the form [New Version\\_Group Assessment Contribution Form.docx \(https://swinburne.instructure.com/courses/61567/files/33559837?wrap=1\)](https://swinburne.instructure.com/courses/61567/files/33559837?wrap=1)   
([https://swinburne.instructure.com/courses/61567/files/33559837/download?download\\_frd=1](https://swinburne.instructure.com/courses/61567/files/33559837/download?download_frd=1))

Important Notes:

- Please be careful to ensure you do not publicly post anything which includes your reasoning, logic, or any part of your work to the Canvas discussion, doing so violates Swinburne plagiarism/collusion rules and has significant academic penalties. Use email to your allocated tutor to raise questions that may reveal part of your reasoning or solution.
- In this Assessment, you must **NOT** use generative artificial intelligence (AI) to generate any materials or content in relation to the assessment task.
- According to the feedback from students, the team has updated the contribution form. All the team members are required to discuss and sign together within the group before submitting. This can solve the issue of student form submissions being overwritten.

## 4 Marking Criteria

The length of the report should be at least 800 words (excluding references). You must acknowledge all statements and information taken from other sources and adhere to the guidelines published regarding plagiarism. All ideas and material taken from references must be cited within the report itself and a full reference list and bibliography (if appropriate) must be provided at the end of the report. Diagrams and/or tables may be used if you think this will strengthen your arguments. Remember that diagrams and tables adapted from other sources must be cited (**Harvard** style) as well.

This assignment is worth 15% of your total mark. You must demonstrate that you:

- Effectively analyze project requirements and translate them into a structured project management plan.
- Develop detailed Work Breakdown Structures (WBS), WBS dictionary, and Gantt charts that accurately represent project tasks, timelines, and dependencies.
- Develop a detailed Risk Management Plan, Monitor Control Plan, and Closure plan.
- Apply UI/UX design principles in designing a prototype interface.
- Collaborate effectively as a team to integrate project management strategies with design elements.

### Rubic of Assignment 1

Criteria	Ratings		Pts
1), Professional Standards in Organization and Writing: The project management plan should be well-organized, professionally written, and free of grammatical errors. This involves a clear structure and logical flow of information.	1 Pts Full marks	0 Pts No marks	1 pts
2) Reference Quality: All references should be appropriately numbered, correctly cited in the text, and fully detailed in the reference list according to the Harvard citation style. Ensure that all sources are relevant, accurately represented, and contribute substantively to the content of the document.	1 Pts Full marks	0 Pts No marks	1 pts
3) Understanding of Project Requirements: Demonstrate a comprehensive understanding of the project requirements.	1 Pts Full marks	0 Pts No marks	1 pts
4) Scope Management (Project Scope, WBS): Clear definition of project scope, and detailed Work Breakdown Structure with WBS deictionary	2 Pts Full marks	0 Pts No marks	2 pts
5) Time Management (Gantt Chart): Well-organized Gantt chart showing the development schedule, and critical path analysis.	2 Pts Full marks	0 Pts No marks	2 pts
6) Risk Management: Comprehensive Risk Register and Plan with identified risks and mitigation strategies.	2 Pts Full marks	0 Pts No marks	2 pts
8) Monitor and Control (Changes Control): Effective strategies for monitoring progress and controlling changes.	1 Pts Full marks	0 Pts No marks	1 pts
9) Closure Plan: Clearly defined criteria for project acceptance and closure.	1 Pts Full marks	0 Pts No marks	1 pts
10) Project Design: 3) User-friendly design of the prototype, and proper usability principles have been followed.	3 Pts Full marks	0 Pts No marks	3 pts
11) Communication Plan: Documentation of minutes for each weekly team meeting, showing effective communication and progress tracking.	1 Pts	0 Pts	1 pts

Criteria	Ratings		Pts
	Full marks	No marks	
			Total points: 15