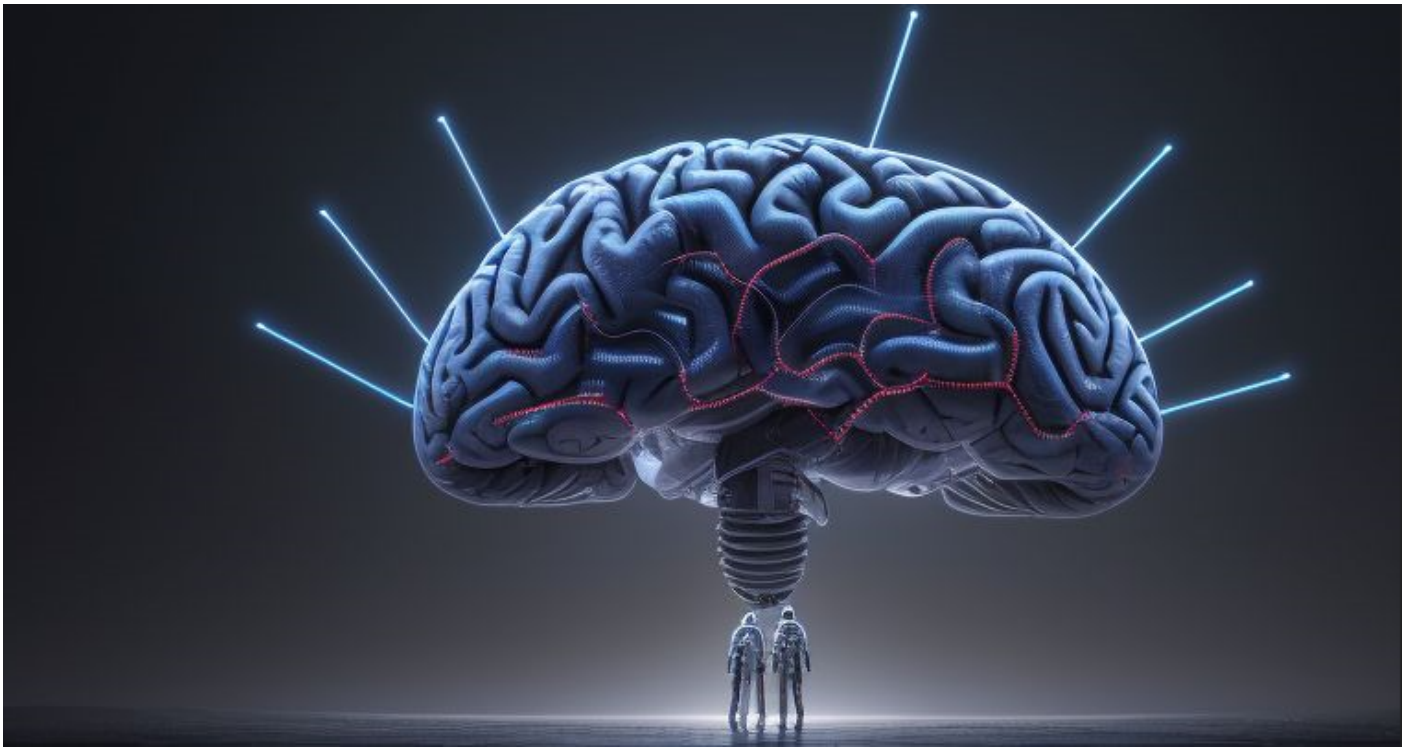

Source: image generated by Joeythemonster/anything-midjourney-v-4-1
Prompt: "*A sci-fi scene with dark background showed robots connecting to neural networks*"

Journal of Development

COMP714: Machine Learning -
Brief of Assignment 2

Dr Daniel Zhang

Games Academy, Falmouth University
v 0.1 (2023-2024)

Table of Contents

- Journal of Development
- Table of Contents
  - Introduction
    - Problems: Description & Scope
    - Solutions: Synthesis & Quality
    - Writing and Diagramming
    - Further Enquiries
    - Solution Reflections
  - Assignment Format
    - Part A: The Research Plan
    - Part B: Record Your Progress
    - Part C: Peer Review
    - Part D: Submission
  - Additional Guidance
  - FAQ
  - Marking Rubrics

Introduction

Top

This assignment is a companion to the ‘Application of Machine Learning’ in COMP714 and aims to document and reflect upon your experiences, challenges, and decision-making while exploring Machine Learning within AI topics. It’s essential to distinguish this development journal from a personal blog; its assessment aligns with the provided marking rubric evaluating the following aspects:

Problems: Description & Scope

Top

Fundamentally, a development journal revolves around problem-solving. Describe the nature of the problem and why it poses an issue. Utilizing the 5Ws&H framework can help deconstruct problems. Understanding the problem’s scope is crucial in gauging the effort required for resolution.

Solutions: Synthesis & Quality

Top

The solution section should narrate how the problem was resolved or addressed. In research, problems often demand multiple attempts before finding a robust solution. Documenting these attempts is vital, including

failures or partially successful solutions, as they often lead to the desired solutions.

Reflect on the quality of the solutions developed; is it a temporary fix or does it conclude an investigative path?

Writing and Diagramming

Top

Effective communication in your writing is crucial. Aim for clarity and a professional tone rather than colloquial language, considering this is a development journal, not a blog.

Diagramming refers to non-textual presentations such as UML or visual models. Ensure clarity and proper referencing of diagrams, charts, or tables in relation to the text.

Further Enquiries

Top

‘Further enquiries’ encompass follow-up actions stemming from investigations into a problem/solution. Sometimes, these may lead to unrelated research paths, which should be noted for potential future exploration. Such enquiries might even redirect activities towards more advantageous approaches. Record these insights.

Solution Reflections

Top

Reflecting on problem-solving activities is personally beneficial. Evaluate the problem, its solution, and your approach. Are there alternative steps for future use? Did the final solution meet the desired outcomes?

Assignment Format

Top

This development journal complements your research and development activities, documenting your research process alongside development artifacts. The assignment consists of the following sections:

Part A: The Research Plan

Top

Present an outline research plan. This is a single **formative** submission. Deliver a brief presentation outlining your research plan during the week 4 workshop. Include details on the selected game for testing, the targeted AI aspects for Machine Learning, and an overview of the data and ML processing intended.

Use the journal to record the game selection process and initial thoughts on the ML process and experiments.

Informal feedback will be provided during the session.

Part B: Record Your Progress

Top

Regularly update your research progress. This is a single **formative** assessment conducted weekly during workshop sessions, allowing discussions with peers and lecturers regarding research progress.

Use the journal to document self-directed research activities, aiding memory and capturing valuable feedback during sessions.

Informal feedback will be provided during the session.

Part C: Peer Review

Top

Attend the peer review, a single **formative** submission after the reading week. Submit your journal link before the peer review session. Engage in reviewing colleagues' work, offering suitable support and suggestions.

Informal feedback will be provided during the session, and formal peer review feedback will be given afterward.

Part D: Submission

Top

Complete the journal on the Falmouth journal system. This is a single **summative** submission. Add your development journal link to the learning space. Your submission will be assessed against the provided rubric.

If unfamiliar with the system, refer to the user guide and possibly the short course.

Formal feedback will be provided within 3 weeks.

Additional Guidance

Top

This assignment complements the COMP714 'Applications of Machine Learning Techniques' and serves as a repository documenting experimental outcomes during the development of data-driven approaches for AI. Delaying journal writing until the assignment's end diminishes its value and potential mark.

Avoid trivial, brief entries common in social media blogs when writing academic journals. Instead, use the journal as a repository for encountered problems, considered solutions, and experimental outcomes. Refer to the rubric for clear guidelines.

Reflect on previous experiences with reflective practice to create frameworks for evaluating experimental activities and gained insights.

Utilize the journal to capture dialogues between yourself, tutors, and peers during tutorial sessions.

FAQ

Top

1. **Q: What is the deadline of this assignment?**
   A: *MyFalmouth* system is the only place where you should be able to find all deadline information according to the requirements and the policies of Falmouth University.
2. **Q: How can I seek help?**
   A: You can email the tutor for any informal clarifications. For short question, MS Teams message would work as well.
3. **Q: Will there be feedback on my work?**
   A: You will be given verbal feedback on your work during the assessment session. Please consider to book an appointment with the tutor if you need in-depth discussions.
4. **Q: Any other issues?**
   A: Any other issues or mistakes in this brief, please inform the tutor.

> **Note**: Please refer to the marking rubric for more detailed information regarding the criteria.

Marking Rubrics

Top

Criterion	Weight	Near Pass	Pass	Merit	Distinction
Scope of problems addressed	15%	Scope is generally poorly defined.	Problem scope is generally, but not always, clear and unambiguous-	Scope of problems is clear and unambiguous	Scope is clearly defined and highlights very poignant issues

Criterion	Weight	Near Pass	Pass	Merit	Distinction
Problem/issue description	15%	Problems presented are often irrelevant to project work. Often difficult to follow the description of the problem	Problems are generally relevant Problems fairly well described	Relevant problems Problem generally well described	Very poignant problems Descriptions are good or very good
Reflections of Solutions	10%	Generally confusing insights with some occasional clarity	Generally clear and good quality of reflection but with some unnecessary/confusing insights Clear and systematic use of a reflective practice framework	Clear and good quality of reflection Clear and systematic use of a reflective practice framework	Very poignant and insightful reflections Clear and systematic use of a reflective practice framework
Writing and diagramming	20%	Technical writing is lacking in detail and hard to follow. Multiple grammar/layout issues. UML is generally difficult to follow and sparse	Generally good technical writing, but with clear grammar/sense issues. UML is generally clear but with small concept issues	Good technical writing style with few grammatical issues. UML diagramming is clear, unambiguous and relevant to writing	Very clear and understandable writing with no obvious errors or issues. Good standard of UML that captures all points and aspect required
Synthesis of solutions	15%	Generally confusing path from problems to solutions	Generally clear train of thought with only the occasional leaps of faith or random jumps.	Clear and unambiguous train of thought from	Exceptionally clear and inspired solutions,

Criterion	Weight	Near Pass	Pass	Merit	Distinction
			Some evidence of academic referencing.	problem to a workable solution Clear evidence of relevant academic referencing.	backed up with suitable & highly relevant academic referencing.
Quality of solutions	15%	Solutions may only work in limited conditions / situations and show significant issues in terms of performance, maintainability and/or cost	Solutions are generally good but may show minor issues in terms of performance, maintainability and/or cost	Solutions fit well within programming architecture and are efficient, effective and economical	Exceptional solutions that show clear novelty in the domain application
Further Enquiries	10%	Next steps considered, but not engaged with	Next steps engaged with as part of the project No real consideration given to academic publishing	Significant consideration is given to potential opportunities, issues and other areas for investigation whilst keeping the goal of the project at heart Some potential for academic	Next steps formed a core part of the development Strong potential for academic publishing opportunities

Criterion	Weight	Near Pass	Pass	Merit	Distinction
				publishing opportunities	
*The above table was generated on https://www.tablesgenerator.com/markdown_tables					