Design & Innovation Project (DIP)

Project Charter

<<GO/WEIQI AI APP>>

Project Group: E009

School of Electrical and Electronic Engineering
Academic Year 2024/25
Semester 2

Date Prepared: 29/1/2025

Project Name:	GO/WEIQI AI APP
Project Supervisor:	A/P Matthew Foreman
Project Manager:	Jayvien Ng Zhen Yuan
Treasurer:	Hooi Chei Kin

Project Purpose or Justification:

- To create a web application that enhances users' understanding and experience of Go by providing problems for players to solve and game simulation with AI.

- Implement AI features to teach players the rules and movements in Go by providing users with real-time analysis to enhance their decision-making, accelerate their learning process, and improve their gameplay by offering instant feedback on each move.

Project Description:

- The project involves developing a web-based application designed to enhance users' understanding and experience for Go.
- This application will help players (especially beginners) by providing a user-friendly interface, interactive guides, and an AI-driven learning assistant with analytics that provides feedback through monitoring players' previous moves.

High-level Project and Product Requirements:

- Include AI-driven features to teach users the rules of Go, suggest optimal moves, and provide feedback such as prompting users that this is an illegal move during the game.
- Implement a visually appealing and intuitive user interface to ensure an engaging experience for players.

Project Management plan:

Problem Statement: Go beginner players struggle to fully grasp the rules of the game. When playing online Go games with AI, they often feel confused about the reasoning behind the AI's moves or suggestions, as many applications do not provide detailed explanations for these decisions.

Main Objective: The goal is to develop a beginner-friendly Go website with AI assistance that teaches users and guides them throughout the game prompting explanations to users, making the learning experience more engaging and enjoyable.

Purchase Considerations:

- All purchase plans are to be discussed as a team and further reviewed by the project supervisor.
- Project manager and Treasurer will work together and double check the budget to prevent over-spending.

Control Activities Plan:

- Project Manager will oversee, program and assist the front-end team, back-end team and full-stack integration team so that all tasks are completed in time.
- Team Members can voice out any difficulties or problems if they face anything so that everyone can work out together as a team to progress effectively.

Summary Budget:

Product	Link	Price	Justification
Hostinger VPS Hosting Plan (KVM 4) 12 Months	https://www.hostinger.com/vps-hosting	$194.14	Our team requires a website hosting service to host our Go website to run both python files for the AI engine and our Go HTML files.
SanDisk Portable SSD	https://shorturl.at/SBpc7	$127.17	We can back up our data, codes and website locally in the SSD on a weekly/monthly basis. Furthermore, in case of the Hostinger service encountering major issues, we can continue to work on our Go source codes locally without being affected.

Total Cost for initial Procurement: $321.31

Initial High-Level Risks:

- Migration of AI tools
  (Alternative solution: We are planning to use Hostinger which have API integration and other services to help with the integration of our source codes to other systems)
- Frontend code does not optimize with Backend code
  (Alternative solution: Check each function of the codes that are used to call respective functions to be displayed on our webpage application)

Summary Milestones	Target Date
- Read the KataGo codes to understand how they are implemented for both Front-end and Back-end. - Finalized brainstorming ideas and project scope of our DIP Go website. - Build a basic Go local website with Go rules implemented and some features.	Week 3
- Project Charter Submission	Week 4
- Purchase of Items and use it to host our website online. - Implement current AI to our website.	Week 5-6
- Combination of Frontend & Backend codes to the Go website. - Implementation of important features to our Go website.	Week 8
- Go website Trial Test on Hall residents and friends - Improvement of Go website.	Week 10
- Improvement of our Go website based on constructive feedback	Week 11
- Final DIP Report	Week 12
- Prepare the slides & website to showcase to the judges.	Week 13

RACI Chart

RACI Chart	**Person**							
Activity	*Jayvien Ng*	*Hooi Chei Kin*	*Luqman*	*Lim Han Xiang*	*Trivinia Tan*	*Lim Swee Kiat*	*Teo Kai Jie Kelvin*	*Shen Jiashu*
Frontend Coding	R, A, C, I		R, C	R				
Backend Coding	R, C	R, A, C		R	R, I	R, I	R	R
Full-Stack Integration	R, I	I	R, A, C	R, C	R	R		
Debugging Issues	R, I	R	R, C, I	R, A, C	R	R	R	R
Beta Coordinator	I	R, I		R	R, A	R, C		