

Supervisor: Dr Hermawan Nugroho
Moderator: Prof T. Nandha Kumar
Project Code: HN-BEng-23-01

Legends: Error Bars for Uncertainty: Moderator Meeting Week:
Submission Dateline: Project Milestone:

Tasks	Autumn Semester															Study Week					Exam			Sem Break			CNV Break			Spring Semester					HR Break			Study Week	
	Sept		Oct		Nov		Dec		Jan		Feb		Mar		Apr		May																						
	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	WEEK 12	WEEK 13	WEEK 14	WEEK 15	WEEK 16	WEEK 17	WEEK 18	WEEK 19	WEEK 20	WEEK 21	WEEK 22	WEEK 23	WEEK 24	WEEK 25	WEEK 26	WEEK 27	WEEK 28	WEEK 29	WEEK 30	WEEK 31	WEEK 32	WEEK 33	WEEK 34	WEEK 35	WEEK 36	WEEK 37					
Project Planning																																							
Hazard Identification, Risk Assessment, Risk Control Form (HIRARC) Form																																							
FYP Briefing and Discussion on Project Specification																																							
Hardware Inspection and Sensor Component Research																																							
Software, Tools and Application Research																																							
Finalising Project Objectives and Project Specification																																							
Hardware and Software Research and Purchase Cost Estimation																																							
Purchase Requisition																																							
Lab Space Booking																																							
Obtaining Ethical Approval																																							
Writing Project Outline and Planning Report																																							
Submission of Project Outline and Planning Report																																							
Research and Literature Review																																							
Researching of Common Application of Edge Computing																																							
Literature Review of Emotion Recognition using ECG																																							
Literature Review of Common Heart Disease																																							
Literature Review of Heart Disease Detection using Machine Learning and Deep Learning																																							
Literature Review of Heart Disease Prediction Model																																							
Literature Review of STM32MP157F DK Edge Computing Device and Application																																							
Literature Review of Software Tools, Model and Architecture for Edge Computing																																							
Design Solution/Application																																							
Research and Learning the Function of STM32MP157F DK Edge Computer																																							
Installing Virtual Machine to Set Up STM32 Software to Flash OS into the Edge Computer																																							
Installing STM32 Cube Programmer in Ubuntu OS																																							
Coding Program to Test Functions of Edge Computer																																							
Integrating Heart Monitoring Sensor onto the Edge Computer																																							
Coding Program to Test Sensors and Perform Experiments to Ensure Accurate Measurements of Sensors																																							
Designing Wearables of that can be Integrated with Heart Disease Detection and Prediction Solution (Optional)																																							
Development of AI Model																																							
Setting Up Environment to Deploy Heart Disease Detection and Prediction Model																																							
Coding Program to Develop Emotion Recognition Model																																							
Coding Program to Develop Heart Disease Prediction Model																																							
Coding Program to Connect Sensor with AI Model																																							
Coding Program to Display Prediction Output on the LCD Display (Optional)																																							
Developing User Interface to Monitor Heart Disease and Data Collected from Sensor (Optional)																																							
Debugging Code to Solve Bugs Found, Improvement of Code/Model																																							
Deployment of Model and Sensor into Edge and Cloud Computer																																							
Combining both Software and Hardware Developed into Wearables (Optional)																																							
Deploying Heart Disease Prediction Model Developed onto Cloud Computer																																							
Deploying Emotion Recognition Model Developed onto Edge Computer																																							
Performing Testing on Real Live User																																							
Obtaining User Experience, Feedback and Model Prediction Result																																							
Performance Improvement and Solving Bugs																																							
Thesis, Documents and Presentation																																							
Writing Sections of Draft Thesis																																							
Draft Typed Thesis Submission																																							
Writing Sections of Final Thesis																																							
Final Thesis, Logbook, Code and Miscellaneous Submission																																							
Preparation of Presentation																																							
Presentation																																							
Return of Project Items																																							

