

Individual Project Report: Wang Dongchen (A0083129E)

Personal Contribution

From the start of the project, I have tapped into my personal experiences in generating possible project topics such as Penmanship and Weight Forecasting. I have done market research for all the possible projects and evaluate the market value and feasibility of the projects. After our team have decided on doing HeyNurse, I have helped in building up the project idea, planning the project flow, research on the market size and possible competitors.

In the development phase of HeyNurse system, I have built up the NLP classification module of the system, helped in evaluation of the overall technical flow, prepared knowledge base dataset for system training, debug and improve on the APIs, and test the entire system in Virtual Machine.

In the preparation of HeyNurse project, I have done the market research, create the promotion video, write up and vet the project report, and build up on Installation and User Guide.

Learning Journey and Outcome

This is the first real world programming project I have done in my life. The learning curve is steep. I am fortunate to have my helpful groupmates, who selflessly guided me in easing into a full stack project development.

I have learned how to use GitHub, Visual Studio Code, MongoDB, Postman, Angular, Mycroft.AI, software installation in different operating systems, frontend and backend interaction, and how to operate interface/systems simultaneously for operation testing.

I also got to apply the NLP knowledge I have learned in the course in building up the classification module. I have learned to adjust different parameters, data settings, pre-processing techniques to improve on classification accuracy. I researched on different classification tools and natural language processing methods. It is interesting to learn the different mechanisms behind different classifiers. I would want to apply more processing methods such as neural network and sentiment mining in the future. During the project, I have also learned to debug errors, interchange data format between different code functions.

The most useful thing I have learned through this project is have an eye opener on how a full stack project is being created. I have learned to use the basic software in program development such as Visual Studio Code. I have tried to use Angular to create simple frontend page and see how the html, scss and ts files are interlinked. I have learned how frontend, backend and database come together in a project. The gaining of these basic

knowledge helps understand better on how projects/programs are being created and run. It will be vital in my future project design and development.

(3) Knowledge & Skills Application

I am interested in designing programs which improves the current education systems or children's learning. Some of the ideas are self-marking systems for teachers, penmanship application for children and intelligent chatbot for children and parents.

I could apply NLP in analysing student's work or questions. With the understanding in Mycroft.AI, I could even design a voice activated chatbot for 24 hours answering of student's questions. It might be also helpful in training student oracy skills.

With the understanding of how a full stack project is created, I have a better gauge of the requirements and feasibility of projects. This will help me greatly in finding future possible projects. It also gives me a basic structure to fall back on when I create my own project.