Individual Project Report

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1. Your personal contribution to the project.

I pitched the idea that a chatbot was a good companion to the email bot as it was an ideal means for ad-hoc communication between the parent and childcare center, and had greater reach compared to emails

I went ahead to research on how to materialize this idea, and discovered that the popular messaging app Telegram was actively providing developers an official means to create chatbots. It is feature-rich (e.g. able to construct MCQs) and widely used. With some more self-study and research, I was able to put together a chatbot backend which interacted with Tg as the frontend.

To create the smartness of the chatbot (i.e. allow it to process and understand natural languages), I research and implemented a integration between the chatbot backend and Google's Dialogflow for intent detection. I designed the chatbot backend to be a central backbone that manages incoming/outgoing messages from Tg frontend, and instructed Dialogflow to process the intents of messages. This provided a clean division between Tg and Dialogflow, and allowed the task of modelling Dialogflow Agents to be cleanly parceled out to another team member.

On the side-line, I also wrote a reference html template for soliciting of parents' availability, containing a unique identifier within its table to allow easy extraction of table info. Report wise, I designed the flow of our report and documented the development process of the chatbot.

2. What you have learnt from the project.

My emphasis in this project was on developing the chatbot, thus in this project I gained in-depth knowledge on how to go about doing so, and also how to leverage on CloudAI technologies such as Dialogflow to imbue smartness into the chatbot.

From reading other team mates work, I understood how to parcel big workflows into small processes so that each small process is more easily implementable in UiPath.

I also studied on how to integrate UiPath with a chatbot frontend as it was one of our prelim ideas. It had its merits, but I still concluded that coding a chatbot backend that used Tg frontend and Dialogflow as workers was a more flexible design.

3. How you can apply this in future work-related projects.

RPA has rich application and work processes are found everywhere, one aspect in my current work is the administration involving in documenting project manpower resource utilization. This is done through the companies web-based portal which UiPath or TagUI can easily automate.

The knowledge and skill attained in processing natural language for analytics purposes may also come in handy when my department goes about analyzing staff surveys. Traditionally, open-ended comments in surveys are interpreted by human, but NLP can surely aid in the analysis in some way or another.