



## APPENDIX D:

# Individual Project Report

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# 1. Personal contribution

**Knowledge Discovery:** In the phase 2 of the project, I was fully responsible for the knowledge discovery framework design and implementation. I try out different algorithms and analysis to see which is the most suitable for knowledge discovery in our content. I conducted basic statistics analysis, clustering analysis, and correlation analysis using R to mining patterns and insight of the offerings from different bank. It provides user a sharp new view of looking at all the offerings from bank, a clear picture from all different marketing materials.

**Simulation:** To generate input for the knowledge discovery, I developed a tool using python to generate different banks' return on different customer portfolio. It allows user to set ranges and steps of different input, also provide sufficient randomness to make sure the data are representative. It converted the knowledge of different bank into digital format and allows datamining and future analysis to happen. This tool and the data generated are also used to test and debug the backend knowledgebase, which help my team spot out few enhancement points.


# 2. Things I've Learnt

**Reasoning System:** The topics taught in class about knowledge extraction, knowledge representation, constraint optimization and knowledge discovery are interesting and I am glad to have a chance to get my hand's dirty and implement these techniques with this mini project. With this project I understand the subject deeper, especially on the knowledge discovery content. These exercises empower me and give me confidence to apply the reasoning system concept on other subjects.

**Implementation technique:** I developed in python and R to fulfill the simulation and knowledge discovery requirement on the project. It has been years since I last time coding with python. I am happy that I got a chance to pick it up again and do some simple thing and get my hand dirty. On my daily job, I normally played the role in business content such as solutioning, requirement gathering, or project management. It feels good to swap the role to development and implementation to see things from different angle.

**Business content:** Last but not least, I believe all the teammate learn more about low risk saving options in local market. As we elaborated in our report, these are essential saving tools for emerging affluent. I should also categorize into this emerging affluent group. I used the





product we created and optimized my saving account and credit card option. It saves me more money now.

### 3. Application of knowledge and skills to other situations

The most valuable reward from this project is that we could convert the concept from slides to some real product. Now we know the framework and steps to create a reasoning system, and it is not hard to replicate to solve other business problems. I also enjoy the process of self-learning the technical part of the implementation, it is handy to apply these skills to solve some problem similar in the future. The best about this project is that we got deep dive into a reasoning system, I plan to implement this framework for another work project as it can solve the problem more efficient than traditional way.

