Project Plan Review

Project Plan

Description	Task	Outcome	Finish date	Achieved
State the Research Objectives and requirement	Project Objectives should be set based on the client's requirement and being expressed in SMART terms.	Project Objectives have been constructed based on the client's requirement and being expressed in SMART terms	23/08/19	YES
Construct Project Milestones	Project Milestone should represent all the completion of each product in the project.	Project Milestones have been listed according the the product(deliverable) of the project	23/08/19	YES
Construct Deliverables	Deliverables should represent all the product of this project.	Consist of presentation, executive summary. Rmarkdown and technical report.	23/08/19	YES
Construct Work Tasks	Work Tasks should be generated according to the activities that needs to be done to produce the deliverables	Work Distribution table has been created which include the works that have been distributed across group members.	23/08/19	YES
Construct Scheduling	Work task should be scheduled in a logical order according to the timeline the team has for the project. Besides, task should be scheduled according to priorities.	Gantt Chart has been implemented to generate the schedule of the project. Logical timeline and task priorities have been included in the chart.	23/08/19	YES
Construct Critical Path	Critical Path needs to be generated from the schedule according to the priorities of the tasks	Critical path has been generated from the schedule.	23/08/19	YES
Construct Constraints	Constraints should include all the assumptions and factors that will limit what the project can achieve.	Certain assumptions have been assessed prior to the project and a few constraints too.	23/08/19	YES

Data Analysis and Model Selection

Description	Task	Outcome	Finish Date	Achieved
Understand and Clean data	Problem/Requirements should be properly break down. Data should be cleaned and modify to help further exploration.	Dealing with missing values and data. Standardise the data	03/09/19	YES
Explore and Analyse	Plots and Summaries should be generated to further analyse and explore the data in order to obtain the solution.	Gained some useful insights from the data by visualization plot	17/09/19	YES
Select Variable	Variables should be selected by using any of the existing methodologies with justification.	Select variables based on our understanding and literature review on credit risk models	24/09/19	YES
Fit GLM	The selected variables should be fit in a few models with appropriate linked function and distribution.	Implemented couple methods for variable selection, StepAIC, Lasso and etc.	01/10/19	YES

Select Model	Fitted Models should be compared by using any of the existing methodologies.	Models are compared based on their accuracy, AUC and GINI score..	04/10/19	YES
Validate Model	Selected model should be validated by obtaining the prediction from the selected model to determine the accuracy.	Uses cross validation method and test / training set to validate our models	09/10/19	YES
Evaluate Results	Result from the validation should be evaluated according to statistic's knowledge. Justification needs to be made to support the result.	Results have been evaluated by comparing the current model and the old model through their AUC curve.	14/10/19	YES
Draw Conclusion	Conclusion needs to be drawn according to the evaluated results.	The new model that we have built perform better than the old ones.	15/10/19	YES

Presentation

Test case description	Expected result	Outcome	Finish date	Achieved
Construct Presentation Slides	Presentation Slide need to be constructed according to the elements that need to be presented to the clients.	Hosted a couple of group meetings to break down our report for presentation.	17/10/19	YES

Technical Report

Test case description	Task	Outcome	Finish date	Achieved
Construct Introduction	Introduction should be constructed so that it describes the problem and the context of the client's requirement.	Briefly explained current struggles in the industry and ways to overcome the issue	21/10/19	YES
Construct Literature Review	Literature review should be constructed by describing the existing model and the pros and cons of the existing model.	Justified all the methods and methodology that we have used.	21/10/19	YES
Construct Data Analysis	Data Analysis should include summaries of the data exploration.	Interpret the plots with explanation and findings.	21/10/19	YES
Construct Method	Methods should be explaining the modelling method that has been utilised in the project. Besides, methods should include the method for variable selection, GLM as well as validation.	The flow of building the model have been explained throughout the report.	21/10/19	YES
Construct Results	Result should be explaining the model coefficients, assumptions and validation under uncertainty.	The models appear to be quite certain, determined on its confidence interval.	21/10/19	YES

Construct Model Interpretation	Model Interpretation should be constructed to answer the questions and the requirements given by the clients.	Proper and precise solutions are structured to address clients questions.	21/10/19	YES
Construct References	References needs to include all the cited material.	References are included at the end of the report.	21/10/19	YES

Executive Summary

Test case description	Task	Outcome	Finish date	Achieved
Summarise problem and context	A concise version of the problem and context from the technical report.	Summarize the problem and context in a non-technical form	1/11/19	YES
Summarise collected data	A concise summary of the data that has been collected.	Briefly explain the collected data and how the data has been cleaned	1/11/19	YES
Summarise reviews literature	A concise summary of the professional has done in the past for any similar project.	Summarize the professional work that has been done in the past project.	1/11/19	YES
Justify the chosen method	Evidence that support the chosen model and methods that have been utilized throughout the project.	Briefly justify the method that has been used with literature review.	1/11/19	YES
Summarise result	Concise summary of the final result.	Summarise the final result in a non-technical form.	1/11/19	YES
State uncertainty	Any uncertainty or assumption in the project.	Show the confidence interval plot for the final model.	1/11/19	YES
Summarise validity and fit of the model	Concise summary of how well the model does.	Briefly explain the performance of the model and the methods of validation being utilized in the project.	1/11/19	YES
Justify recommendation	Evidence that supports the recommendation given to the client.	Provide recommendations with evidence for the future project.	1/11/19	YES

Project Plan Review

Test case description	Task	Outcome	Finish date	Achieved
Construct Project Management Summary	Concise summary of the overall project management	Review and comment on the project management	1/11/19	YES
Construct Team Reflection	Reflect and summarise the overall working experience with each member of the team.	Provide recommendations and what can be done better in the future project.	1/11/19	YES

Work Breakdown

Dominic Yan Kit Chow	- Project Plan - Data Exploratory - Literature Review - Technical Report (Introduction, Literature Review, Data) - Executive Summary
Jing Heng Lim	- Project Plan - StepAIC - Technical Report (Method, Results) - Project Plan Review
Joseph Grench	- Project Plan - Random Forest - Lasso - Technical Report (Method, Results) - Executive Summary
Vinnie Ng	- Project Plan - Model Comparison - Discussion - Technical Report (Discussion) - Project Plan Review

Reflection

Overall the project has been carried out smoothly according to the plan. However, there are a few unforeseen circumstances which lead to some changes to the plan. As there were three different modelling methods being utilized in the modelling process (StepAIC, Lasso, and Random Forest), therefore three modelling processes, (from selecting variables to validate the model), has been carried out separately.
Besides, as the final presentation has happened earlier than planned, the team has cut down the time for preparing the presentation.

There are a few improvements that can be implemented so that the project can be better managed in the future. Firstly, instead of the waterfall model, iterative or agile will be a more adequate methodology for this project. This is because using throughout the project, a lot of testing needs to be done before moving on to the next step. Furthermore, the team can incorporate version control system as it will help to avoid clashing of the code from different team members and save time on combining the code. Last but not least, work can be broken down into smaller parts so that the team can have better time management and task delegation.