RMSC 5001 Information on final project 2018/19 2nd term

The purpose of this project is to provide a hand on experience for students to try the techniques learned from this course on their own real dataset. Students are required to choose two or more of the following topics:

1. Monte Carlo Simulation method on multivariate data.
2. Estimating volatilities and correlation using GARCH(1,1) or EWMA model.
3. VaR modeling.
4. Principal Component Analysis.
5. Logistic Regression / Multinomial Logit.
6. Linear Discriminant Analysis
7. Classification Tree
8. Artificial Neural Network.

There are several remarks on this project:

- This project must be application-orientated. Students need to demonstrate how the selected techniques are used to solve a real-life problem. The data has to be a real dataset of **at least** 1000 records. In case if the data are sensitive or confidential, data can be re-labeled, recoded or even transformed.
- You may use the same dataset or two separate datasets to demonstrate these selected techniques.
- The final report contains introduction on your problem and description of your dataset; methods to use; findings and conclusion.
- Students may use R, SAS and/or EXCEL in their analysis.
- Students are expected to hand in their group report. The report should **not** more than 10 pages of A4 size (tables and figures are exempted from this 10-page limit). Please write down the names and student id of each member in the group on the cover page and **indicate the percentage of work load of each member involved**.
- Students can form their own group but the group size cannot be more than **4** students.
- Please choose only **one** member in your group to submit a soft copy of your report and related R, SAS programs and/or EXCEL files and datasets.

This project consists of **30%** of your total mark in this course and to be submitted on or before **May 13, 2019.**

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