Homework 7: ML Project
(in teams of 3-5 students)

Predictive Analytics

Simon Business School

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Overview: In this assignment, you will develop a predictive model and a decision support system (DSS) that evaluates the risk of Home Equity Line of Credit (HELOC) applications. The dataset and additional information can be found here: https://community.fico.com/s/explainable-machine-learning-challenge

Details:
1. Using the dataset develop a predictive model to assess credit risk.
    a. Report on the performance of your model.
    b. Compare your model to other models.
2. Design and develop a (running) prototype of an interactive interface that sales representatives in a bank/credit card company can use to decide on accepting or rejecting applications.
    a. What did you assume about the technical proficiency of the user?
    b. How could the user explain predictions made by the model using the interface?
3. Prepare a 4-pages report that summarizes the key ideas of your work.
4. Prepare a 5-10 minute presentation with live demonstration of your system that covers the above topics, and include a discussion about lessons learned.

Alternative:

If you are interested in developing and applying predictive models in a different context, you may do so. Your project should: use data, contain exploratory analysis of the data, include a predictive model and analysis of its performance, and include an interface that for the user of the model. Different projects may require a varying degree of effort on different aspects of the work (which is ok), but the overall amount of work should be significant.

Before working on the project, submit a 1/2-page proposal to the instructor to approve your plan.

Submission: Use Vocareum to register your team and upload your submission (presentation, report, code). Note that your solution may be shared online with other students.