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Data Science Course Project Proposal

For my Data Science Course Project, I would like to utilize data that I encounter while working at Credit Karma to develop a robust approval model that would tell us the likelihood that a customer is approved for a range of financial products. When accessing our website, customers trust us to give them a snapshot of their financial health, while also suggesting financial products that add value to both their financial and personal well-being. Because a customer is at risk for an adverse credit hit if they apply for a loan and are denied, we want to ensure that we only suggest products that our consumer has a reasonable likelihood of being approved for.

With this in mind, I wanted to build an approval model for one of Credit Karma's partners in auto loans. I have data from both the partner and from the CK database itself. I can incorporate both personal consumer information, such as income, age, and credit history, as well as vehicle information, such as loan value, year, make, model, etc. I will use feature extraction to determine which of these features are most relevant to my model. Because I can pull from CK’s large customer base, I have plenty of data to use to test and train a model.

In addition, I can compare my results with the current models used by CK to evaluate approval odds for customers. With very accurate approval odds information, our customers can make the most informed decisions when making the decision to apply for a specific loan/financial product. If I am able to do this successfully, I’d like to expand my scope to also include a model/logistic regression that predicts whether a new borrower is a good or bad credit risk.