

ECE 759 – Software Project Proposal

I have chosen to work on the Credit Card Approval Dataset that is an available dataset on Kaggle. Dataset consists of features such as Gender, Annual income, housing type, education level, occupation type and the ground truth label if the credit card has been approved or not. With this dataset, we aim to predict with the given data of the customer, whether the candidate has a chance of approval of his credit card or not.

Dataset for reference: <https://www.kaggle.com/rikdifos/credit-card-approval-prediction>

I plan to use python and libraries/ modules like Tensor Flow, Keras, SciKit learn and pandas to train the model and test it and check the accuracy and further analyze the performance of the models and perform hyperparameter tuning accordingly. The rough plan of action is as follows:

1. Week 1: Read research papers to get better understanding of available algorithms and shortlist the models suitable for my problem statement. create environment and Git repository and install all supporting modules
2. Week 2: data preprocessing such as data cleansing, data transformation and data reduction
3. Week 3 and 4: splitting the data set into training, validation and test sets and implementing the models
4. Week 5 and 6: plotting graphs, evaluating the models using metrics such as ROC, F1 scores and accuracy and perform hyperparameter tuning to improve the performance
5. Week 7: jotting down all the ideas and progress, Writing the report and pack the code