EECS 3401 – Introduction to AI and

Logic Programming

Project

**Loan Approval Prediction**

**Exploring and Predicting with a Dataset**

**Group Members:**

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**Abstract:**

This program uses machine learning and data analysis to develop models and algorithms that predict the likelihood of loan approval based on the given features. Based on the features in the dataset, the prediction of a loan approval will be conducted.

**Task 1:** Framing the problem and looking at the big picture.

* Supervised learning – We are using numerical values and the data has been labeled.
* Regression task – Predict the value based on calculation and determining the approval of the loan (can be considered as 0 and 1)
* Batch learning
  + Small data set
  + No continuous flow of data coming into the system
  + No need to adjust to changing data rapidly

**Task 2:** A description of the dataset and 3 graphs of EDA.

**Task 3:** Data cleaning and preprocessing.

**Task 4:** Training and evaluation of three machine learning algorithms, analyze findings, and compare results.

**Task 5:** 3 graphs for the best performing algorithm.

**Task 6:** Any limitations you have run into.

**Task 7:** Appendix 1: Source code with proper comments and attribution to any code you have reused.

**Task 8:** Appendix 2:

* Link to your dataset.
* Link to your executed Jupyter notebook on github. The notebook should contain the code for your machine learning models and should show the results. Your code should be properly commented, and you must attribute any code you are using from someone else.