**INFO 5307 Fall 2024 Progress Report on System Design Project**

**Full Last Name: Goriparthi**

**Full First Name: Aiswarya**

**Project Name: Optimizing Loan Approval Processes in Home Credit Group Company**

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| **Section One: Activity Summary**  Provide a short overview (bullet points or short paragraphs) of the project progress during this reporting period since project part 1 submission.  *For example: What is the status of each deliverable? What are the progress of tasks by the different deliverables you are completing at this reporting period?* |
| Information Gathering: Finalized  • Development: Acquired and sanitized loan data; verified data quality for examination.  Exploratory Data Analysis (EDA): Status: In Progress: To identify patterns in loan processing timelines and approval rates, preliminary analysis was carried out. Additional information and visuals are being developed.  Development of Machine Learning Models • Status: Underway  • Development: Initial models were created to forecast loan approval results. The following stage will see further feature engineering and refinements.  Building a Tableau Dashboard  • Status: Unstarted; Progress: First dashboard layout draft. Development will start after the model analysis and EDA are finished. |
| **Section Two: Assessment of the Overall Project Objectives**  Provide a brief report on the issues or challenges you face at this stage and how you will address these issues or challenges.  *For example: At this stage, how feasible is it to achieve your project plan and meet the stated objectives? What are the risk of incompletion (not production ready) due to unforeseen challenges?* |
| 1.Despite successful data collection, some inconsistencies were observed in loan application data (e.g., missing values and outliers).  2.The initial machine learning models showed underwhelming performance, particularly in predicting loan approval outcomes with high accuracy.  3. Due to the ongoing data analysis and model development, the Tableau dashboard creation has been delayed. |
| **Section Three: Evidence of Progress**  Provide evidence of your project progress at this stage, it could be a publicly accessible URL of your Monday.com view, your product dashboard, an architecture diagram of your system, mock-up of the product user interface design, or other documentation. |
| <https://view.monday.com/7621899045-afff23f2df1761144ec4a0f17b83d951?r=use1> |