**Project Initialization and Planning Phase**

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| Date | 10 July 2024 |
| Team ID | 739835 |
| Project Title | Credit card approval prediction using ML |
| Maximum Marks | 3 Marks |

**Project Proposal (Proposed Solution) report**

The proposal report aims to transform credit card approval using machine learning, boosting efficiency and accuracy. It tackles system inefficiencies, promising better operations, reduced risks, and happier customers. Key features include a machine learning-based credit model and real-time decision-making. Automating the credit approval process using machine learning can significantly benefit financial institutions by enhancing accuracy and efficiency. This project aims to develop a robust predictive model that can be seamlessly integrated into existing systems, thereby improving the overall credit approval process. This proposal outlines a comprehensive approach to developing a credit approval prediction model using machine learning. By following this plan, we aim to create a reliable and efficient solution for financial institutions.

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| **Project Overview** |  |
| Objective | The primary objective is to revolutionize the credit card approval process by implementing advanced machine learning techniques, ensuring faster and more accurate assessments. |
| Scope | The project comprehensively assesses and enhances the credit card approval process, incorporating machine learning for a more robust and efficient system. |
| **Problem Statement** |  |
| Description | Addressing inaccuracies and inefficiencies in the credit card approval prediction adversely affects operational efficiency and customer satisfaction. |
| Impact | Solving these issues will result in improved operational efficiency, reduced risks, and an overall enhancement in the lending process, contributing to customer satisfaction and organizational success. |
| **Proposed Solution** |  |
| Approach | Employing machine learning techniques to analyze and predict creditworthiness, creating a dynamic and adaptable credit card approval system. |
| Key Features | - Implementation of a machine learning-based credit assessment model. |
|  | Real-time decision-making for quicker credit card approvals.  Continuous learning to adapt to evolving financial landscapes. |



**Resource Requirements**

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| **Resource Type** | **Description** | **Specification/Allocation** |
| **Hardware** | | |
| Computing Resources | CPU/GPU specifications, number of cores | T4 GPU |
| Memory | RAM specifications | 8 GB |
| Storage | Disk space for data, models, and logs | 1 TB SSD |
| **Software** | | |
| Frameworks | Python frameworks | Flask |
| Libraries | Additional libraries | scikit-learn, pandas, numpy, matplotlib, seaborn |
| Development Environment | IDE | Jupyter Notebook, pycharm |
| **Data** | | |
| Data | Source, size, format | Kaggle dataset, 614, csv UCI dataset, 690, csv |