**AI-Based Credit Risk Assessment for Small Business Lending**

**ABSTRACT**

This project aims to develop an intelligent and data-driven credit evaluation system to enhance the accuracy of risk assessment for small enterprises. Traditional credit assessment models often rely on limited financial history and rigid evaluation criteria, making it difficult for small businesses to secure loans. By leveraging machine learning algorithms and predictive analytics, this project will analyze diverse data sources, including financial records, transaction history, market trends, and alternative data such as customer reviews and social media sentiment. This approach will enable lenders to make more informed and fair lending decisions, reducing the likelihood of defaults while promoting financial inclusion.

The project will focus on designing an AI-powered risk assessment framework that integrates feature engineering, model training, and explainability techniques to ensure transparency in decision-making. By utilizing both supervised and unsupervised learning models, the system will classify borrowers based on their creditworthiness, providing risk scores to help financial institutions optimize loan approvals. The model will be evaluated on real-world datasets to ensure robustness and adaptability across different business environments. This AI-driven approach will not only streamline the loan approval process but also foster economic growth by enabling fair and efficient credit access for small businesses.

**Key Features:**

* **AI-Powered Risk Assessment** – Uses machine learning algorithms to analyze borrower’s data and predict credit risk with high accuracy.
* **Financial Inclusion Enhancement** – Aims to increase access to credit for small businesses, particularly those with limited credit history, by using non-traditional data sources.
* **Fraud Detection and Anomaly Detection** – Identifies suspicious patterns and potential fraudulent activities, ensuring a secure lending process.

**Team Members-**

V.Pavani - 22B81A6628

M.Rajeshwari - 22B81A6630

M.Sandhya Rani - 22B81A6640

P.Sushmitha - 22B81A6652