

Consultancy Assignment

Topic: AI-Enabled Risk Assessment Model for EV Loan Customers

This project focuses on developing an AI-enabled risk assessment model for electric vehicle (EV) loan customers in collaboration with RevFin. The objective of the project is to enhance credit evaluation processes by integrating behavioral, demographic, and psychometric variables into a dynamic and adaptive risk scoring system. A study was conducted by Prof. Ram Mohan Dhara, BIMTECH, Greater Noida

The initiative aims to move beyond traditional credit assessment methods by incorporating psychographic constructs such as conscientiousness, impulsiveness, risk preference, time orientation, and decision-making patterns. These behavioral indicators provide deeper insights into borrower behavior and help improve the accuracy of credit risk predictions.

The project involves several key phases, beginning with a detailed data audit and alignment process. Existing datasets, including demographic profiles, underwriting parameters, and repayment histories, are reviewed to identify relevant variables for predictive modeling. Machine learning techniques such as Random Forest, XGBoost, and Artificial Neural Networks are applied to develop advanced predictive models and improve risk scoring accuracy.

Customer segmentation techniques, including clustering methods such as K-Means and hierarchical clustering, are used to group applicants based on behavioral and financial characteristics. The project also explores adaptive testing techniques and the development of a mobile-based application that captures psychometric inputs and enables real-time credit evaluation.

The final outcome is a robust, AI-driven risk assessment framework that supports faster, more accurate lending decisions while expanding financial access for EV entrepreneurs.