University Risk Analytics Dashboard – Case Study

This project is an end-to-end data analytics and decision-support system designed to help universities identify, predict, and intervene in student academic risk using data-driven techniques.

Problem Statement

Universities often fail to identify at-risk students early, leading to poor academic outcomes. Manual monitoring is inefficient and reactive.

Solution Overview

1. Interactive dashboard for monitoring student performance
2. Rule-based risk categorization and danger scoring
3. Early-warning forecasting system
4. Machine Learning-based high-risk prediction
5. Automated intervention recommendations

Technologies Used

Python, Pandas, NumPy, Streamlit, Plotly, Scikit-learn, Git/GitHub

Impact

The system transforms raw student data into actionable insights, enabling proactive interventions and improving academic outcomes.