AI-Based Dropout Prediction & Counselling System on Salesforce CRM

Project Title:

AI-Based Dropout Prediction & Counselling System on Salesforce CRM

Industry:

Education (EdTech / Higher Education Institutes)

Target Users:

Students, Parents/Guardians, Mentors/Faculty, Administrators/Counsellors

Phase 1: Problem Understanding & Industry Analysis

Requirement Gathering, Stakeholder Analysis, Business Process Mapping, Use Case Analysis, AppExchange Exploration

Phase 2: Org Setup & Configuration

Salesforce Editions, Profiles, Roles, Permission Sets, Sandbox Setup, Sharing Rules

Phase 3: Data Modelling & Relationships

Custom Objects: Student, Attendance, Assessments, Fees, Alerts. Relationships: Master-Detail, Lookup

Phase 4: Process Automation

Validation Rules, Flows, Workflow Rules, Approval Process, Notifications

Phase 5: Apex Programming

Triggers, SOQL, Batch Apex, Scheduled Apex, Async Processing, Test Classes

Phase 6: User Interface Development

Lightning App Builder, LWC, Experience Cloud Portal, Risk Dashboard

Phase 7: Integration & External Access

LMS, Payment Gateway, Scholarship APIs, REST APIs, Named Credentials

Phase 8: Data Management & Deployment

Data Import/Export, Data Loader, Change Sets, SFDX

Phase 9: Reporting & Security

Reports, Dashboards, Security Controls, Audit Trail

Phase 10: Final Presentation & Demo

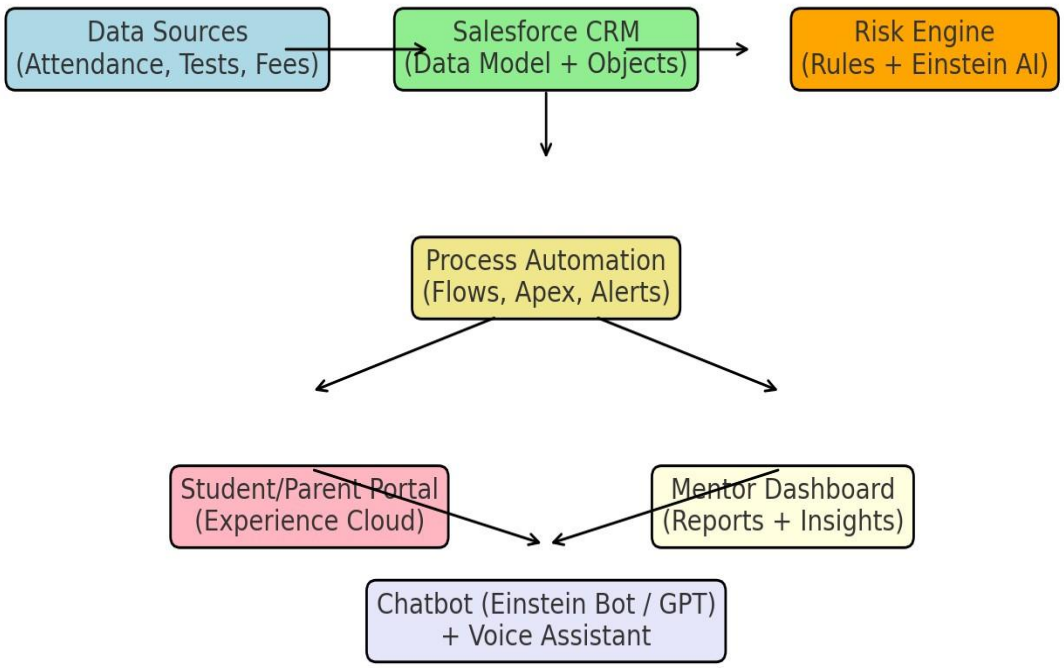
Pitch, Demo Walkthrough, Feedback Collection, Handoff Documentation

Key Feature: Risk Zone Tracking

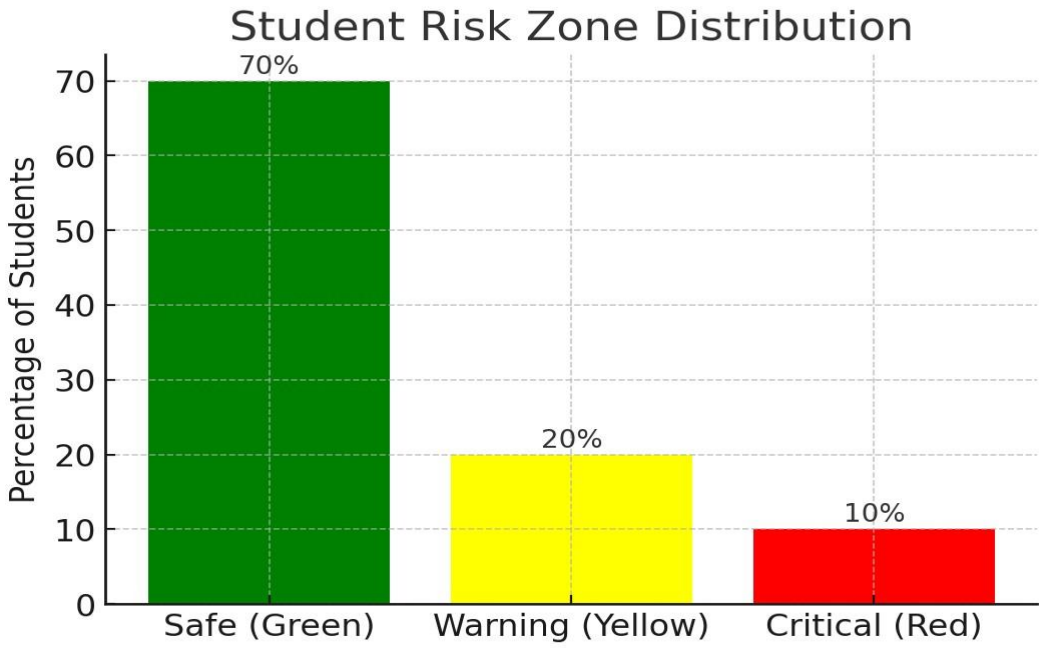
Students are classified into 3 zones:

- Green Zone: Safe → No alerts sent
- Yellow Zone: Warning → Alerts sent with improvement guidance
- Red Zone: High Risk → Immediate mentor + parent notification Rules:
- If performance drops → move from Green → Yellow → Red
- If performance improves → move Red → Yellow → Green
- Alerts stop automatically when student reaches Green Zone
- System also suggests personalized guidance to help students progress back to safe zone

System Architecture Flow Diagram



Student Risk Zone Distribution (Example)



Individual Student Progress Over Time