Program Analysis and Flow Report

Project Title: Student Placement Prediction App

Deployment link: *https://student-placement-predictor-bsv2.onrender.com*

Date: August 31,2025

Project Team ID: PTID-CYPD-JUL-25-24

Project ID: PYPR-1C

Technology Stack: Flask(python), SQLite, scikit-learn, Bootstrap, HTML/CSS (Glassmorphism),Git/Github

Purpose of the project

- Predict student placement outcomes(placed/not placed) based on academic and aptitude parameters.
- Provide career planning interventions and recommendations for students.
- Allow authenticated users to add, view, edit and delete placed student records.
- Give administrators control over users and ensure secure access.
- Enhance faculty/placement to offer career support and guidance with daily placement insightful quotes.
- Allow users to leave reviews after using the App.

Main Components

- Authentication & User Management
- Placement Prediction
- Database Layer (SQLite)
- Placement Management
- Intervention Notifications

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- Daily Placement Insights
- UI/UX with Glassmorphism theme
- App Review

Data Flow

- User Authentication ➏ Register/Login ➏ Session created.
- Prediction Flow: Inputs(Fullname,CGPA,IQ,Profile) ➏ validated➏ model predicts ➏ placed saved or recommendation shown.
- Placement Management Flow: Users view, edit, delete their placed students.
- Notification Flow: Daily insightful message on login.

Analysis

Strengths	**Weaknesses/Areas for Improvement**	**Future Enhancement**
Secure authentication Persistent student management Personalized interventions Daily Placement Insights UI (glassmorphism) App review	Model lacks probability/confidence Limited input features No advanced role-based access Static recommendations	Add analytics dashboard for user Integrate job/internship APIs Add faculty/mentor roles Store placement test results Improve ML model

Flow Diagram

[User] ➏ Login/Register ➏ [Authentication System] ➏ [Session Created] ➏ [Daily Placement insight displayed] ↓ [Prediction Form] ➏ [Validation] ➏ [ML Model] ↓ Placed?-------No ➏ Show Recommendations | Yes ↓ Save Student ➏ [Placed_Students Table] ↓ View/Edit/Delete ➏[Manage Students Interface]

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