# SmartCareerAI - Project Documentation

**Date:** August 29, 2025

**Status:** Completed

## 1. Updated Project Architecture

This section contains the revised diagrams representing the application's file structure and its interaction with the database.

### 1.1. Application File Structure Flowchart

This flowchart illustrates the complete file and directory structure of the project, incorporating all modules from the latest updates.

graph TD  
 A[SmartCareerAI Web App] --> B[Public Pages];  
 A --> C[User Panel];  
 A --> D[Admin Panel];  
 A --> E[/api];  
 A --> F[Includes];  
 A --> G[Assets];  
 A --> H[reports/];  
  
 subgraph Public Pages  
 B1[index.php];  
 B2[login.php];  
 B3[register.php];  
 B4[forgot-password.php];  
 end  
  
 subgraph User Panel  
 C1[dashboard.php];  
 C2[test.php];  
 C3[results.php];  
 C4[career-roadmap.php];  
 C5[mentor-connect.php];  
 end  
  
 subgraph Admin Panel  
 D1[dashboard.php];  
 D2[users.php];  
 D3[reports.php];  
 D4[manage-careers.php];  
 end  
   
 subgraph /api  
 E1[ai\_suggestions.php];  
 end  
  
 subgraph Includes  
 F1[db.php];  
 F2[header.php];  
 F3[footer.php];  
 end  
  
 subgraph Assets  
 G1[css/];  
 G2[js/];  
 G3[img/];  
 end  
   
 B --> F;  
 C --> F;  
 D --> F;  
 C --> E;

### 1.2. Database Interaction Flowchart (Cloud Architecture)

This diagram illustrates how the application's main components interact with the various tables within the smartcareerai MySQL database.

graph TD  
 subgraph Application Components  
 User\_Panel[User Panel];  
 Admin\_Panel[Admin Panel];  
 Public\_Pages[Public Pages & Auth];  
 end  
  
 subgraph "SmartCareerAI Database (MySQL)"  
 Users[users];  
 Admins[admins];  
 Admin\_Invites[admin\_invites];  
 Password\_Resets[password\_resets];  
 Test\_Questions[test\_questions];  
 Test\_Sessions[test\_sessions];  
 Test\_Answers[test\_answers];  
 Results[results];  
 Careers[careers];  
 Mentors[mentors];  
 end  
  
 Public\_Pages --> Users;  
 Public\_Pages --> Admins;  
 Public\_Pages --> Admin\_Invites;  
 Public\_Pages --> Password\_Resets;  
   
 User\_Panel --> Users;  
 User\_Panel --> Test\_Questions;  
 User\_Panel --> Test\_Sessions;  
 User\_Panel --> Test\_Answers;  
 User\_Panel --> Results;  
 User\_Panel --> Careers;  
 User\_Panel --> Mentors;  
   
 Admin\_Panel --> Users;  
 Admin\_Panel --> Admins;  
 Admin\_Panel --> Careers;  
 Admin\_Panel --> Mentors;  
 Admin\_Panel --> Test\_Questions;  
 Admin\_Panel --> Results;

## 2. Project Status Report: August 2025

**Project Title:** AI-Based Career Counselling Web App

**Date:** August 29, 2025

**Credibility and Contribution:**

Project Manager - Sami Amir Rizwan

Backend Team – Syed Faiq Ahmed

Frontend Team – Aleesha Amir

**Current Phase:** Development (Week 5 - Admin Panel & Finalization)

### Module Status Breakdown

#### Public Pages

* **Status:** ✅ **Completed & Enhanced**
* **Details:** The public-facing module is fully functional, responsive, and secure. A forgot-password.php page was added, supported by the password\_resets table, to handle account recovery. All pages correctly utilize reusable components from the /includes directory.

#### User Panel

* **Status:** ✅ **Completed**
* **Details:** All core user functionalities are implemented and tested. This includes the aptitude test system (test.php), session management (test\_sessions table), answer processing (test\_answers table), and the final results display (results.php). The user dashboard, career roadmap, and mentor connection pages are also fully operational.

#### Admin Panel

* **Status:** 🏃 **In Progress**
* **Details:** Development of the admin panel is now the primary focus.
  + **Admin Authentication:** A secure, invite-only registration system has been implemented using the admin\_invites table. The initial invite code is SCA-ADMIN-2025-XYZ.
  + **User Management (users.php):** Functionality to view and manage registered users is currently being built.
  + **Career Management (manage-careers.php):** The interface for admins to add, edit, and delete career data in the careers table is under active development.

### Next Planned Tasks

1. Finalize the remaining Admin Panel modules (reports.php, users.php).
2. Conduct comprehensive end-to-end testing of the entire application flow.
3. Prepare for initial deployment and User Acceptance Testing (UAT).

## 3. Key Project Features & Functions

The SmartCareerAI platform now incorporates the following features:

### Core User Features

* **User Authentication:** Secure user registration, login, and password management (users, password\_resets tables).
* **Aptitude Testing:** A dynamic testing module that stores questions (test\_questions), tracks user test sessions (test\_sessions), and records every answer (test\_answers).
* **AI-Powered Results:** Generates detailed results including a percentage score, category-wise breakdown (category\_scores), and personalized AI-generated career feedback (ai\_feedback) stored in the results table.
* **Career Exploration:** Allows users to view detailed information about various careers (careers table) and access curated skill development roadmaps.
* **Mentorship Connection:** Provides a platform for users to connect with professional mentors (mentors table).

### Administrative Functions

* **Secure Admin Access:** A separate and secure login system for administrators (admins table).
* **Invite-Only Registration:** New administrators can only register using a unique, single-use invite code (admin\_invites table).
* **Content Management:** Admins can manage the database of careers, test questions, and mentor profiles through dedicated admin pages.
* **User Oversight:** The users.php panel allows administrators to view and manage the platform's user base.

## Skeleton Cloud Diagram Overview)

**High-Level Architecture:**

* 🌐 **Users (Students, Counselors, Admins)**
  + Access via **Web Interface** → SmartCareerAI Portal

**Frontend Layer:**

* UI Components (Login, Register, Home, Blogs, Reports, FAQs)
* Responsive design powered by **HTML, CSS, JS, Bootstrap**

**Application Layer (PHP Business Logic):**

* Authentication & Authorization
* Career Assessment Engine
* Blogs & Articles Management
* Reports & Analytics
* Email/Notification Service

**Backend Database Layer (☁️ Cloud SQL – sqldb):**

* users → All users (students, counselors, admins)
* career\_assessments → Test data, results, career matches
* sessions → Session tokens for security
* blogs → Career blogs & articles
* reports → Career reports linked to students
* password\_reset → Secure tokens for recovery
* admin\_invite\_codes → Onboarding for admins

**Data Flow:**

1. Users send requests through **web portal**
2. PHP **Application Layer** processes the logic
3. System queries/stores data in **Cloud SQL (sqldb)**
4. Results are displayed back to users via UI (e.g., reports, assessments)

## 🎯 Visual Flowchart (Database Cloud Skeleton)

**Diagram Elements to be Rendered in Picture:**

* ☁️ **Cloud Database (sqldb)**
  + Tables: users, career\_assessments, sessions, blogs, reports, password\_reset, admin\_invite\_codes
* 🔐 Authentication connects to → users, sessions, password\_reset
* 🧠 Career Assessment connects to → career\_assessments, reports
* 📚 Blogs Module connects to → blogs
* 📊 Reports connect to → reports, users
* 👨‍💼 Admin Management connects to → admin\_invite\_codes, users, blogs

📅 **Final Documentation Release:** August 2025