

# Proposal for Career Counselling Software

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## 1. Introduction

This proposal outlines the development of a **Career Counselling Software** that includes a **portfolio website**, **mobile application (Android & iOS)**, and an **admin panel** for managing leads, students, counsellors, and AI-based analysis for career guidance. The software will facilitate lead generation, psychometric and aptitude assessments, AI-driven recommendations, and student-counsellor mapping.

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## 2. Software Components & Features

### 2.1 Portfolio Website

The website will serve as a landing page to educate users about the platform, showcase services, and redirect students to the mobile application. It will include:

- **Home Page:** Overview of vision, mission, and goals.
- **Services & Features Page:** Explanation of career counselling offerings.
- **AI-Powered Career Assessment:** Introduction to AI-driven assessments.
- **Contact Us Page:** Inquiry submission form.
- **Student Login/Signup:** Redirection to mobile app.

### 2.2 Mobile Application (Android & iOS)

The mobile app will allow students to register, undergo assessments, and receive AI-driven career guidance. Key features include:

- **User Authentication:** Login/Signup with email, phone, or social accounts.
- **Onboarding Process:** Collection of primary student information.
- **AI-Based Test Assignment:** Psychometric or aptitude tests based on inputs.
- **Assessment Interface:** User-friendly test-taking environment.
- **AI-Driven Career Report:** Detailed insights & suggestions.
- **Career News Section:** Latest career-related updates.
- **Counsellor Interaction:** Chat, call, or schedule a session with assigned counsellors.

## 2.3 Admin Panel

The admin panel will act as the backend for managing students, counsellors, and AI-powered analytics. It will include:

- **Lead Management:** Capture and track student inquiries.
  - **Student Management:** Maintain student profiles and test data.
  - **AI-Driven Analysis & Report Generation:** Automated report creation based on test results.
  - **Counsellor Management:** Assign and manage counsellors.
  - **Advanced Filtering & Search:** Search students based on categories, budget, branches, and country of study.
  - **Recommendation Engine:**
    - College List Generation
    - Horoscope & Birth Chart Recommendations
    - AI-Suggested Career Roadmap
  - **Approval Workflow:**
    - Primary & Secondary Review Process
    - Final Report Approval & Student Submission
  - **Newsletter Posting:** Regular updates and career insights for students.
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## 3. Process Flow

1. **Lead Generation:** Students arrive via the website and are redirected to the app.
  2. **Student Registration & Primary Data Collection:** Students enter basic details.
  3. **AI-Based Assessment Assignment:** The AI agent assigns an aptitude or psychometric test.
  4. **Test Completion & AI Analysis:** AI analyzes the test results.
  5. **Advanced Search & Filtering:** Admin applies filters for best-fit colleges.
  6. **Career Recommendations:** AI generates a report based on test results, preferences, and horoscope.
  7. **Approval Process:** The report undergoes primary and secondary approvals.
  8. **Counsellor Assignment & Review:** A counsellor is mapped to the student.
  9. **Student Receives Final Report:** The final career report is shared with the student.
  10. **Guidance Session:** Students can consult with assigned counselors.
  11. **(Future Scope) Admission Tracking:** Admission follow-up (not in the current phase).
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## 4. Technical Architecture

### 4.1 Technology Stack

- **Frontend:**
    - Website: React.js / Next.js
    - Mobile App: Flutter (Android & iOS)
  - **Backend:**
    - Node.js / Express.js
    - AI Processing: Python (TensorFlow, OpenAI API, or custom models)
  - **Database:**
    - PostgreSQL / MongoDB
  - **Cloud Services:**
    - AWS / Azure for hosting & storage
    - Firebase for authentication & notifications
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## 5. Development Scope of work, Timelines & Milestones

### 1. Introduction

This document outlines the detailed **Scope of Work (SOW)** for the development of the **Career Counselling Software**, covering all phases from design to deployment and final delivery.

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### 2. Project Phases & Deliverables

#### 2.1 Design Phase

- **Wireframing:** Creation of wireframes for the website, mobile app, and admin panel.
- **UI/UX Design:**
  - User interface design for web, mobile, and admin.
  - User experience flow optimization.
  - Prototyping and design revisions.

#### 2.2 System Design & Architecture

- **System Architecture Planning:**
  - Defining microservices and monolithic components.
  - Deciding cloud infrastructure and hosting approach.

- **Database Design:**
  - Schema definition for students, counsellors, tests, reports, and recommendations.
  - Relational (PostgreSQL) and NoSQL (MongoDB) considerations.

## 2.3 API Development & Integration

- **API Listing & Documentation:**
  - RESTful API endpoints for mobile and web.
  - Authentication (JWT, OAuth, Firebase Auth).
- **Backend Development:**
  - Implementation of AI-based test assignment.
  - Report generation and AI-driven recommendations.
  - Counsellor management and student-counsellor mapping.
  - Newsletter and career news module.

## 2.4 Frontend Development

- **Web Application (Portfolio Site):**
  - Home page, features, contact, and career insights.
- **Mobile Application (Android & iOS):**
  - Registration & onboarding.
  - Test-taking interface.
  - Career recommendation dashboard.
  - Counsellor communication module.
- **Admin Panel:**
  - Lead management.
  - Advanced student filtering & AI analysis.
  - Approval workflow & report management.
  - Counsellor and news management.

## 2.5 AI Model Development & Fine-Tuning

- **LLM (Large Language Model) Fine-Tuning:**
  - Training models on career guidance data.
  - AI-based psychometric test analysis.
  - College recommendation engine with horoscope integration.

## 2.6 Deployment & Hosting

- **AWS Cloud Setup:**
  - EC2 instances for backend & database.
  - S3 for storage, CloudFront for CDN.
  - RDS for database management.

- **Test Hosting & Staging Environment:**
  - Setup of a staging server for internal testing.
- **Production Hosting & Live Deployment:**
  - Final cloud infrastructure for live users.

2.7 Mobile App Store Setup & Deployment

- **Google Play Store Setup:**
  - Developer account setup.
  - App submission & approval process.
- **Apple App Store Setup:**
  - Developer account creation.
  - App submission & compliance testing.
- **App Store Listing & Optimization:**
  - Writing descriptions, adding screenshots & metadata.
  - SEO optimization for app discoverability.

2.8 Testing & Quality Assurance (QA)

- **Functional Testing:** Ensuring all features work as expected.
- **Load & Stress Testing:** Simulating high traffic scenarios.
- **Security Testing:** Vulnerability assessments & encryption verification.
- **Cross-Platform Testing:** Ensuring seamless experience on Android, iOS, and web.
- **Bug Fixing & Performance Optimization:** Resolving issues from testing feedback.

2.9 Final Delivery & Handover

- **Final Version Deployment:** Deployment of stable production version.
- **Documentation & Training:** Providing user manuals & admin training.
- **Post-Launch Support:** Bug fixes, updates, and feature enhancements.

Phase	Task	Duration
Phase 1	Requirement Gathering & Wireframing	1 Weeks
Phase 2	UI/UX Design & Prototyping	2 Weeks
Phase 3	Backend & AI Development	5 Weeks
Phase 4	Website & Mobile App Development	6 Weeks
Phase 5	Admin Panel Development	

Phase 6	Testing & QA	2 Weeks
Phase 7	Deployment & Go-Live	1 Weeks

Total Estimated Time: **~17 Weeks (~4 Months)**

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## 6. Future Scope & Expansion

- Admission Tracking & Application Submission
  - Integration with College Admission Portals
  - Career Mentorship & Live Webinars
  - Internship & Job Matching Engine
  - AI Chatbot for Instant Career Guidance
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## 7. Cost Estimation

### 7.1 Development Cost Breakdown

Module	Description	Cost (INR)
Website	Portfolio website with services, vision, contact, and redirection to app	25,000
Mobile App (Android & iOS)	Onboarding, test-taking, news section, report view functionality	75,000
Admin Panel	Lead management, counsellor management, test assignment, AI analysis, report generation, multi-level approval	85,000
<b>Total Development Cost</b>		<b>₹2,00,000</b>

## 7.2 Additional Features (Optional)

Feature	Description	Cost (INR)
Horoscope & Birth Chart Analysis	LLM fine-tuning for personalized recommendations	25,000
Payment Gateway Integration	Transaction management system setup	15,000

## 7.3 Third-Party Costs (Directly Paid by Client)

Service	Cost
AWS Cloud Hosting	As per usage (billed directly)
Domain Registration	Paid yearly(directly to provider)
Open AI API (GPT-4)	Paid directly (charges depends on usage - <b>100 words ≈ 130 tokens</b> <b>Pricing:</b> ~\$0.03 per 1,000 tokens <b>Cost for 100 words:</b> ~\$0.0039 (0.39 cents) )
Google Play Store Developer Account	\$25 (One-time)
Apple App Store Developer Account	\$99 per year

## 7.4 Maintenance Charges

Service	Description	Cost (INR)
Monthly Maintenance	Weekly updates for packages and bugs, SLA (48-hour issue resolution), compliance adherence, logs monitoring, testing	10,000 per month (for the 1st year)

## **8. Conclusion**

This Career Counselling Software will empower students with AI-driven career recommendations, structured counsellor guidance, and an advanced filtering system for finding the best-fit colleges. With a scalable architecture and robust backend, the system will streamline career counselling services efficiently.