SMART INDIA HACKATHON 2025

- **Problem Statement ID – SIH25094**
- **Problem Statement Title- One-Stop Personalized Career & Education Advisor**
- **Theme- Smart Education**
- **PS Category- Software**
- **Team ID-**
- **Team Name : CodeIntellix**

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IDEA TITLE

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We propose a Digital Guidance Platform (Mobile + Web App) that acts as a personalized career and education advisor for students after Class 10 and 12. The platform helps students choose suitable streams, explore degree programs in nearby government colleges, and understand career opportunities linked with each course.
Key features include:

- Aptitude & Interest Assessment to suggest streams based on strengths and preferences.
- Course-to-Career Mapping showing career paths, higher studies, and job opportunities.
- Government College Directory with location-based listings, eligibility, and facilities.
- Timeline Tracker with reminders for admissions, scholarships, and exams.
- AI-Powered Personalization for tailored course, college, and career suggestions.
- Offline Accessibility for rural and low-internet areas.

This solution bridges the awareness gap, reduces dropouts, and promotes government colleges as strong career-building institutions. Its uniqueness lies in combining aptitude tests, career mapping, and localized guidance in one inclusive platform.

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TECHNICAL APPROACH

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Frontend (Web & Mobile):

React.js / Next.js – Web interface
React Native / Flutter – Mobile app
Tailwind CSS – UI design

Backend & APIs:

Node.js + Express.js – Backend services
Python (FastAPI/Django) – AI & recommendation engine
REST API / GraphQL – Data communication

Database & Storage:

PostgreSQL / MySQL – Student & college data
MongoDB – Resources & unstructured content
Cloud Storage (AWS/GCP/Azure) – E-books, materials
Jira/Trello – Project management

AI/ML & Analytics:

Scikit-learn / TensorFlow – Aptitude & recommendation system
NLP Models – Interest/response analysis
Power BI / Tableau – Usage analytics

Deployment & Infrastructure:

Docker & Kubernetes – Scalable deployment
AWS / GCP / Azure – Hosting and cloud services
Firebase / Supabase – Authentication & notifications

Tools:

GitHub/GitLab – Version control & CI/CD
Figma – UI/UX prototyping

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FEASIBILITY AND VIABILITY

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Feasibility Analysis:

- Technical: Feasible with proven frameworks like React, Node.js, and Python.
- Operational: Partnerships with government bodies and NGOs ensure authentic, updated content.
- Economic: Cost-effective with government/NGO funding support and low maintenance.
- Social: Bridges awareness gaps, guides informed decisions, and strengthens trust in government colleges.

Potential Challenges and Risks:

- Low digital literacy in rural areas.
- Poor internet connectivity limiting accessibility.
- Difficulty in maintaining accurate, updated college/course/scholarship data.
- Privacy and security concerns regarding student information.
- Risk of declining engagement if the app feels uninteresting or complex.

Strategies to Overcome Challenges:

- Provide simple UI/UX with multilingual support and offline access.
- Use government-verified APIs and partnerships for real-time data updates.
- Introduce gamification, success stories, and reminders to sustain engagement.
- Implement strong data encryption and secure login mechanisms.
- Ensure compliance with national data protection and privacy norms.

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IMPACT AND BENEFITS

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Potential Impact on the Target Audience:

- Provides personalized guidance on subjects, courses, and careers.
- Reduces confusion after Class 10/12 for students.
- Increases awareness among parents for better decision-making.
- Minimizes dropout rates by clarifying long-term benefits.
- Promotes trust in government colleges and improves enrollment

Benefits of the Solution:

- Social: Equal access to career guidance, reduced inequality, fewer dropouts.
- Economic: Affordable education promotion, improved employability, course–career alignment.
- Environmental: Digital-first, paperless approach using e-books and online resources.
- Overall: Inclusive growth, rural outreach, and sustainable empowerment of students.

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RESEARCH AND REFERENCES

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