Nexora-AI-Based Career Guidance and Planning System

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***Abstract*—Nexora is an intelligent career guidance platform designed to support students after SSLC and PUC in making informed academic and vocational choices. It integrates, interest mapping, to generate personalized career pathways. The system presents clear options such as PUC streams, diplomas, ITI, polytechnic, degree programs, and skill-based courses. A location-based module helps students discover nearby institutes, eligibility criteria, fees, and scholarship opportunities. Nexora recommends suitable paths based on student interests, strengths, budget, and long-term goals. It provides entrance exam steps and skill-building suggestions. The platform supports multilingual access and low-bandwidth usage for inclusivity. Built with a user-friendly interface, Nexora aims to reduce confusion and misinformation during crucial career decisions. By offering guided choices and expert-backed resources, it empowers students to select careers confidently. Ultimately, Nexora enhances educational outcomes and supports smooth transitions from school to higher studies or vocational training.**

***Index Terms*—AI Career Guidance, Machine Learning, MERN Stack, Roadmap Generator, CET Rank Predictor, Student Counseling System, Chatbot.**

I. INTRODUCTION

After completing SSLC or PUC, many students feel confused about choosing the right career path.To solve this problem, Nexora has been created — a web-based career guidance system that helps students make smart and confident decisions. Nexora uses Machine Learning models, Linear Regression and Random forest to analyze each student's marks and predict their outcomes, interests, and goals. It provides a personalized career roadmap that guides students from education to the right career path.The system also includes an AI chatbot that allows students to chat, ask questions, and get real-time advice. The chatbot helps students clear doubts and customize their career roadmap based on their needs. Nexora is simple, interactive, and accessible, so even students in rural areas can easily use it and plan their future effectively.

II. METHODOLOGY

Nexora – AI-Based Career Guidance and Planning System uses, user data. AI and machine learning analyze these profiles to recommend suitable careers, generate tailored career roadmaps, and identify skill gaps with upskilling suggestions. This structured, cloud-based system ensures accurate, personalized, and actionable career guidance.

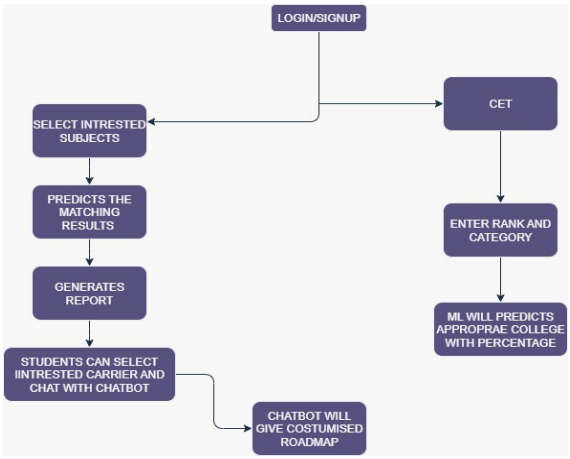
III. PROBLEM STATEMENT

After SSLC or PUC, students struggle to choose the right academic or career path. Existing platforms provide only general information and lack personalized guidance. Career decisions are often influenced by peer pressure or limited knowledge, leading to stress, wrong choices, and wasted time .There is also a lack of awareness about courses, entrance exams, and job opportunities. A smart, AI-based system with a chatbot is needed to provide personalized career guidance and clear career roadmaps for students.

IV. OBJECTIVES

1.To help students make informed decisions about their career after SSLC and PUC.
2.To suggest suitable streams, degree courses, and career options using AI-based logic.
3.To generate a personalized roadmap from education to career.
4.To make career planning easy, accessible, and accurate for all students.

5.To reduce confusion and wrong career selections among students.
6.To promote the use of digital technology in education and counseling.



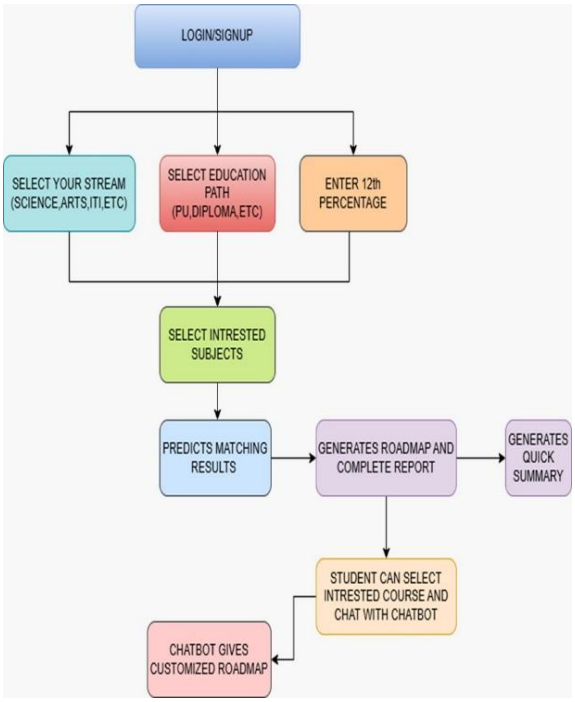


Fig: Basic architecture for sslc, puc & cet students.

V. SCOPE

The scope of Nexora spans the full spectrum of career discovery, planning, and skill development . AI-driven recommendations, personalized roadmaps, job-market insights, and continuous skill tracking into a single unified platform. Instead of relying on multiple fragmented systems for college searches, course suggestions, and career counselling. Nexora centralizes all essential career-planning components.

a. Students / Learners
Nexora empowers students by offering personalized career recommendations.AI-generated career pathways, step-by-step roadmaps, course and certification suggestions, skill-gap analysis, job-role insights. This helps students make informed decisions and prepares them to become confident, industry-ready professionals.

b. Career Counsellors / Guides
Counsellors benefit from AI-supported analysis tools, student profiling dashboards, and structured career mapping features. Nexora reduces manual effort, enhances counselling accuracy, and equips mentors with data-driven insights to guide students more effectively.

c. Institutions / College Administration
Institutional heads and administrators can track student career readiness, monitor counselling outcomes, analyze interest trends across departments, and align academic programs with job-market requirements. Nexora supports institutional planning, enhances placement preparedness, and improves the overall quality of career guidance services.

d. Platform Admin
The system-level admin manages users, permissions, analytics, psychometric modules, model updates, and feature enhancements. They ensure high-level security, model accuracy, platform scalability, and smooth, long-term operation of Nexora.

VI. LITERATURE SURVEY

1. Shiksha, CareerGuide
Key Features
Provides information on courses, colleges, and exams
Limitations
Not personalized Offers too much generic information

2. Psychometric Tests (MBTI, Aptitude)
Key Features
Helps identify interests and personality types
Limitations
Does not provide step-by-step career planning

No clear roadmap for career development

3. Government Portals (e.g., NCS)

Key Features

Provides career and job information

Offers national-level access

Limitations

Outdated user interface

Not student-friendly

Low engagement

4. AI in EdTech (Research)

Key Features

AI supports improved decision-making in learning and guidance

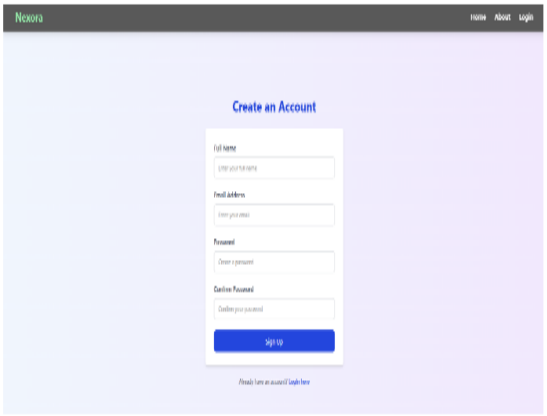
Limitations

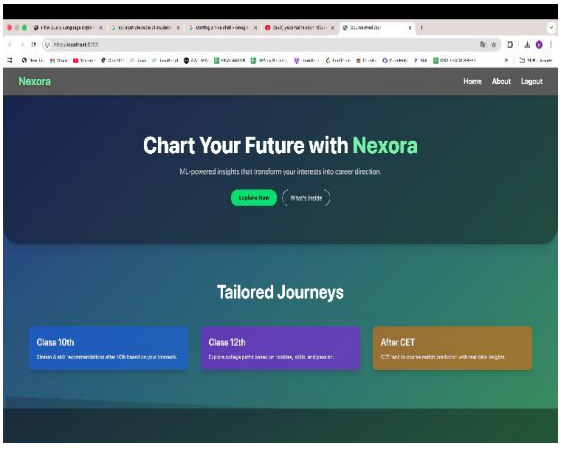
Platforms are in early development stages

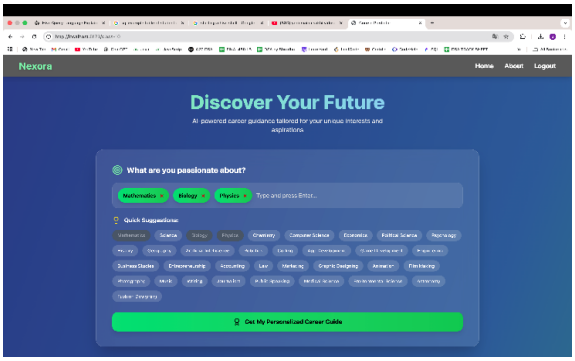
Often lack integration with local systems

VII. RESULTS

LOGIN/SIGNUP PAGE







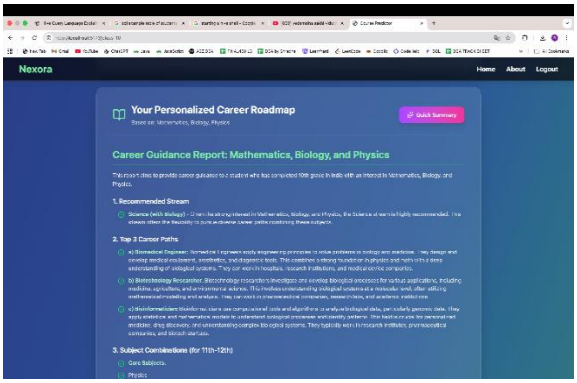


FIG: DEMO/OUTPUT SCREENSHOTS.

VIII. FUTURE SCOPE

1.Can be used in schools, colleges, and career counseling centers.

2.Helpful for rural students who don't have access to counselors.

3.Can be developed into a mobile app for wider use.

4.Future updates can include multilingual support and AI-based aptitude tests, and AI quizzes to assess skills and interests.

5.Can be integrated with educational boards or government portals for large-scale use.

6.Can include online meetings and webinars for interactive career guidance sessions.

IX. CONCLUSION

Nexora is an innovative career guidance system that helps students after SSLC and PUC choose the right academic and professional path. It removes confusion, builds confidence, and helps students plan their future through a clear, step-by-step roadmap. By using AI and modern web technologies, Nexora makes career guidance simple, smart, and accessible to every student. The addition of an AI-powered chatbot allows

students to ask questions, get instant guidance, and customize their career roadmap, making the system even more interactive and supportive.

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