Chameli Devi Institute of Professional Studies
Department of Computer Science & Engineering

Minor Project Presentation (Review I)

Session: 2025-26 (V SEM)

CareerX AI – Smart Resume Optimizer, Job Role Recommender and Interview Assistant

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PRESENTATION OUTLINE

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ABSTRACT

- CareerX-AI is an intelligent career guidance platform for students and professionals.
- It helps users identify suitable job roles based on their skills, qualifications, and interests.
- The system uses Artificial Intelligence (AI) to analyze user data and suggest matching job opportunities.
- It includes an AI-based resume optimizer that creates job-specific, professional resumes.
- The platform also offers personalized interview preparation tips to improve user performance.
- The main goal is to make career planning data-driven, efficient, and easily accessible to everyone.

PRESENTATION GUIDELINES

Literature Review Format

S. No.	Reference	Year	Methodology / Techniques Used	Key Findings	Limitation / Research Gap
1	R. Sharma et al., AI-Based Career Counselling System	2024	Used rule based recommendation engine	Helped users match jobs with qualifications	Lacked personalized AI feedback
2	K. Patel et al., Smart Resume Screening using NLP	2023	Used keyword matching and basic NLP	Automate resume shortlisting	Could not rank resumes effectively
3	A. Khan et al., AI for Interview Preparation	2025	Used chatbot for Q&A practice	Improved user confidence	Didn’t adapt to individual job roles
4	M. Roy et al., Career Suggestion Portal	2024	Survey-based job suggestions	Provided general guidance	No machine learning or data analysis

INTRODUCTION

- In today's competitive job market, fresh graduates often face challenges in preparing professional resumes and identifying suitable job roles.
- Many students on how to align their resumes with industry requirements. lack proper guidance
- Existing job portals provide listings but do not offer AI-based feedback or skill-based job recommendations.
- CareerX AI is developed to solve these issues using artificial intelligence and natural language processing.
- The system analyzes resumes, extracts key skills, and recommends job roles that best match the user's profile.
- It also assists in interview preparation by generating role-specific questions and answers using GPT-based models.
- The ultimate aim is to bridge the gap between job seekers and recruiters using a single, smart, and interactive platform.

PROBLEM STATEMENT

- Most fresh graduates face difficulties in creating professional and ATS-friendly resumes.
- Resume screening by recruiters is often inconsistent and subjective, leading to unfair shortlisting.
- Existing platforms like LinkedIn or Naukri only provide job listings — they don't analyze or optimize resumes.
- Current resume builders lack AI intelligence and cannot offer personalized feedback or skill mapping.
- Available mock interview tools generate generic questions, not specific to any job role.
- Therefore, there is a need for an AI-driven system that provides resume optimization, career role recommendation, and personalized interview preparation — all in one platform.

OBJECTIVES & SCOPE

Objectives:

- To build an AI-powered platform that suggests career options based on user skills.
- To generate optimized resumes tailored to specific job roles.
- To guide users for interview preparation through interactive assistance.
- To help students align their learning path with career goals.

Scope:

- Applicable for students, job seekers, and professionals.
- Can be expanded to include real-time job search and skill-based training modules.

PROPOSED SYSTEM & ITS ADVANTAGES

- Proposed System (CareerX AI):
- Uses AI to guide users toward suitable career paths based on skills and interests.
- Analyzes user data to recommend ideal job roles and opportunities.
- Auto-generates professional resumes customized for each profile.
- Provides AI-based interview preparation with personalized feedback.

Advantages:

- Offers accurate and data-driven career recommendations.
- Delivers personalized resume and interview support.
- Saves time and effort in career decision-making.
- Promotes equal career opportunities for students and professionals.

FEASIBILITY STUDY (TECHNICAL, OPERATIONAL AND ECONOMICAL)

Technical Feasibility:

- Developed using AI, ML, and cloud-based technologies ensuring scalability.
- Requires minimal hardware with support for existing systems.
- Integration with databases and APIs makes implementation easy.

Operational Feasibility:

- Simple and interactive interface for users of all backgrounds.
- Automates career guidance, reducing manual effort.
- Delivers continuous and personalized AI feedback for users.

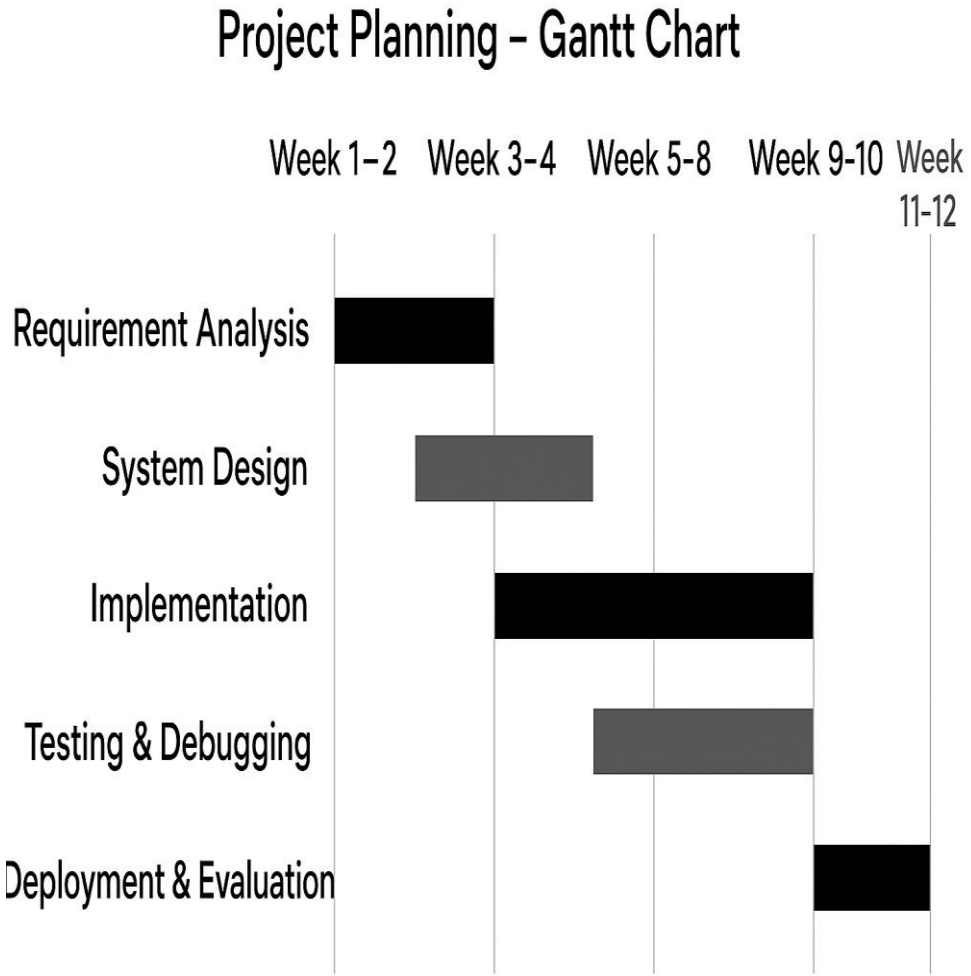
Economic Feasibility:

- Built using open-source tools, reducing development cost.
- Low maintenance and hosting expenses.

PROJECT PLANNING – GANTT CHART

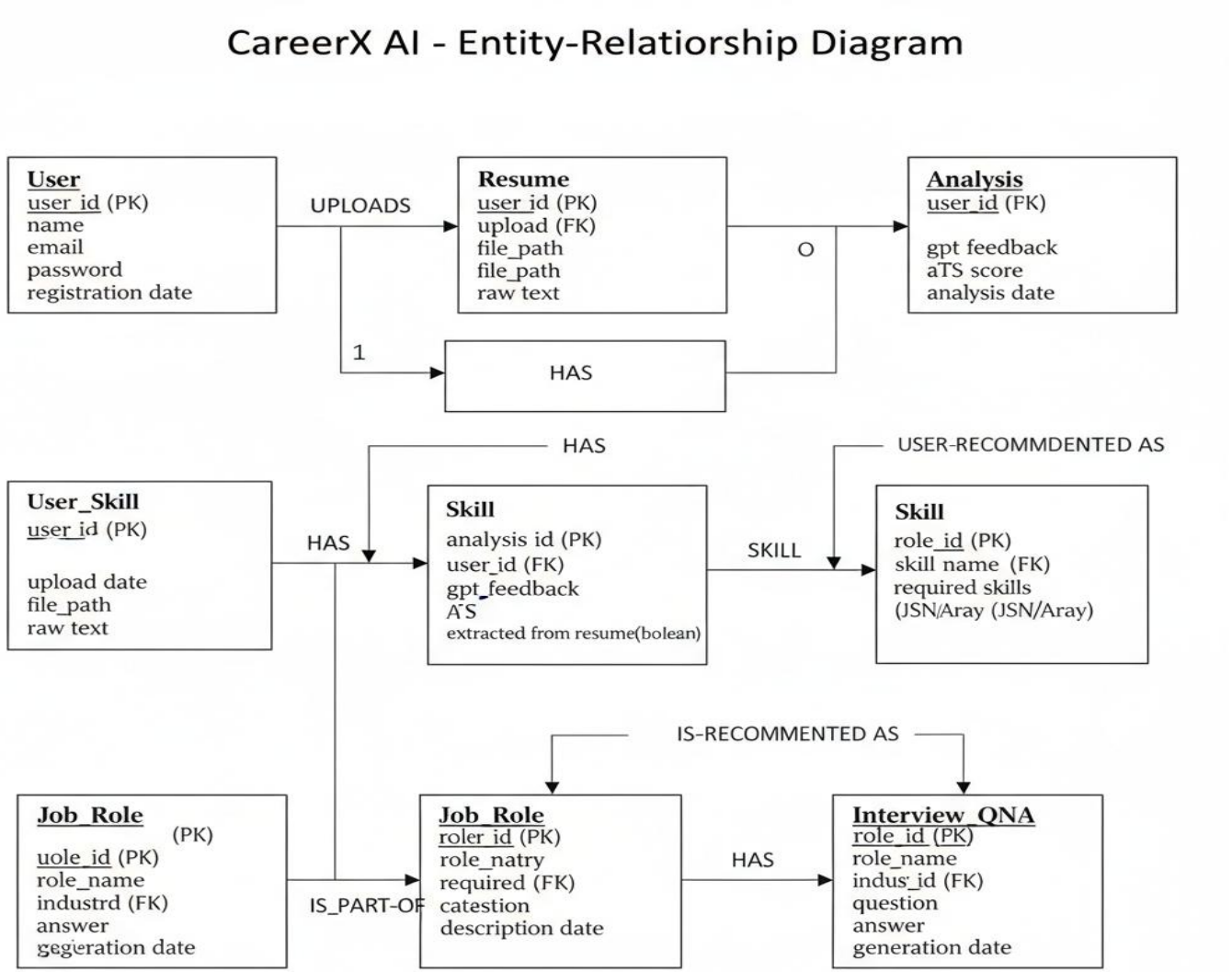
The development of CareerX AI is divided into key phases to ensure systematic progress:

- Requirement Analysis (Week 1–2) –
  Understanding user needs and defining system goals.
- System Design (Week 3–4) –
  Creating architecture, data flow, and interface designs.
- Implementation (Week 5–8) –
  Developing AI modules, resume builder, and user interface.
- Testing & Debugging (Week 9–10) –
  Ensuring accuracy and resolving errors.
- Deployment & Evaluation (Week 11–12) –
  Hosting, user feedback, and performance review.

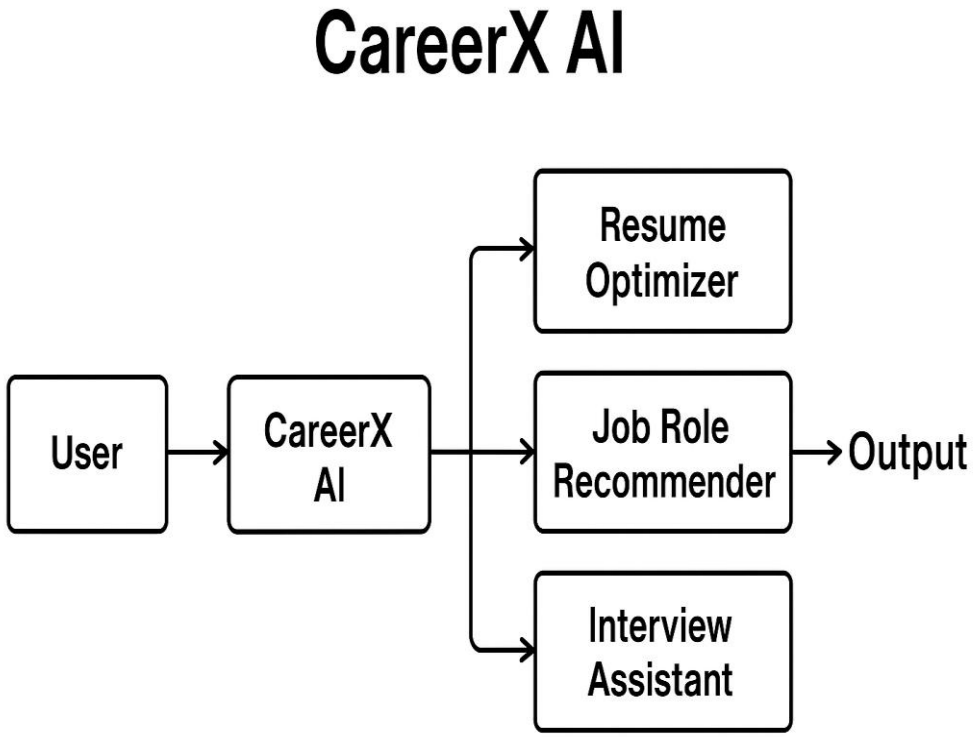


SYSTEM ANALYSIS TOOLS

E–R (Entity–Relationship) Diagram



Data Flow Diagram



HARDWARE & SOFTWARE REQUIREMENTS

Hardware Requirements:-

- **Processor:** Intel Core i5 or above for smooth performance
- **Memory (RAM):** Minimum 8 GB recommended
- **Storage:** 256 GB SSD or higher for faster data access
- **Connectivity:** Reliable broadband internet connection

Software Requirements:-

- **Operating System:** Windows 10 / macOS / Linux
- **Frontend Technologies:** React.js, Tailwind CSS
- **Backend Frameworks:** Node.js, Express.js
- **Database:** MongoDB / MySQL for secure data storage
- **Development Tools:** Visual Studio Code, Git, Postman

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Thank You


Any
Questions