Section	Details to be Filled by Student
Project Title	**Future Mesh: Enhancing Employability Through Mentorship and Smart Job Matching**
Student Name & Roll No.	**ABHISEK PANDA 22CSE072** **DEBABRATA MISHRA 22CSE140** **DIPTESH NARENDRA 22CSE224**
Guide/Supervisor Name	**Dr. Gitanjali Mishra**
Month of Review	2nd Month

1. Problem Definition

Description	Many students struggle to find the right career path due to limited access to structured mentorship and relevant job opportunities. At the same time, universities face challenges in managing placements, and companies lack efficient ways to reach suitable candidates from targeted institutions or departments.
Brief description of the problem	There is currently no single, unified system that effectively connects students, universities, alumni, and employers. This gap results in missed opportunities for students to receive personalized guidance, relevant job alerts, and timely updates. Placement teams are burdened with manual, repetitive processes, while employers often face an overwhelming number of unsuitable applications due to the absence of smart filtering and targeting tools.
Importance / real-world relevance	• Give students tailored job suggestions and direct mentor access. • Allow universities to streamline and automate placement activities. • Provide employers with targeted, pre-screened candidates. • Strengthen alumni involvement in guiding and supporting students.

2. Objectives

Objective No.	Objective Description
1	Connect students with verified mentors and industry professionals to provide career guidance and skill development support.
2	Enable universities to efficiently manage job postings, candidate shortlisting, and overall placement activities.
3	Deliver smart job recommendations to students by matching their academic records, skills, and eligibility criteria.

3. Existing System Analysis

Ref. No.	Title & Source	Key Features	Limitations
1	Conventional Job Portals	Show job vacancies, allow resume uploads, and offer simple search filters.	No structured mentorship, no university-specific targeting, and very limited alumni involvement.
2	University Placement Portals	Handle campus recruitment notices and maintain student profiles.	Limited features, no real-time chat, and no smart filtering based on skills or CGPA.
3	Alumni Networks	Enable networking and experience sharing among professionals.	Not linked to placement processes and lack structured job recommendations or recruiter shortlisting tools.

4. Requirement Analysis

Functional Requirements:

1. Provide role-based dashboards for students, alumni, HODs, company HRs, and admins, each with access to their specific features.
2. Enable key features such as job posting, candidate shortlisting, job application tracking, real-time alumni–student chat, and analytics dashboards.

Non-functional Requirements:

1. The system should be secure, with role-based access control, encrypted data exchange, and privacy for user information.
2. The platform should be fast, lightweight, mobile-friendly, and accessible from any device.

5. Tools & Technology Stack

Category	Tool/Technology	Reason for Selection
Programming Language	TypeScript, JavaScript	TypeScript provides type safety and scalability for both frontend and backend, while JavaScript ensures flexibility and wider library support.
Framework	React (with Next.js), Node.js,	React + Next.js enable responsive and modern frontend development; Node.js offers a fast, lightweight, and scalable backend.
Database	MongoDB Atlas	A cloud-hosted NoSQL database that securely stores diverse data like profiles, job posts, and chat records, with easy scalability.
IDE/Editor	Visual Studio Code	A versatile, widely used editor with strong support for both Python and JavaScript, plus useful extensions for web development.
Version Control	Git & GitHub	Allows efficient team collaboration, version tracking, and code backup during development.

6. Preliminary Design

Diagram Type	Status
System Architecture Diagram	Attached
Workflow Diagram	Attached
UI Mock-ups / Wireframes	Attached

7. Work Done So Far (Month 2)

Task	Status (Done / In-progress / Pending)
Literature survey	**Done**
Requirement analysis	**Done**
Architecture finalization	**Done**
Tool setup	**Done**

Percentage of Work Completed

Work Completed (60%)

The project has covered the landing page and authentication modules (login & registration). The Super Admin dashboard is functional with platform-wide controls. On the user side, student and alumni modules are live with login, register, profile & resume, mentorship chat. In addition, the Alumni, HOD dashboards have been fully designed and implemented.