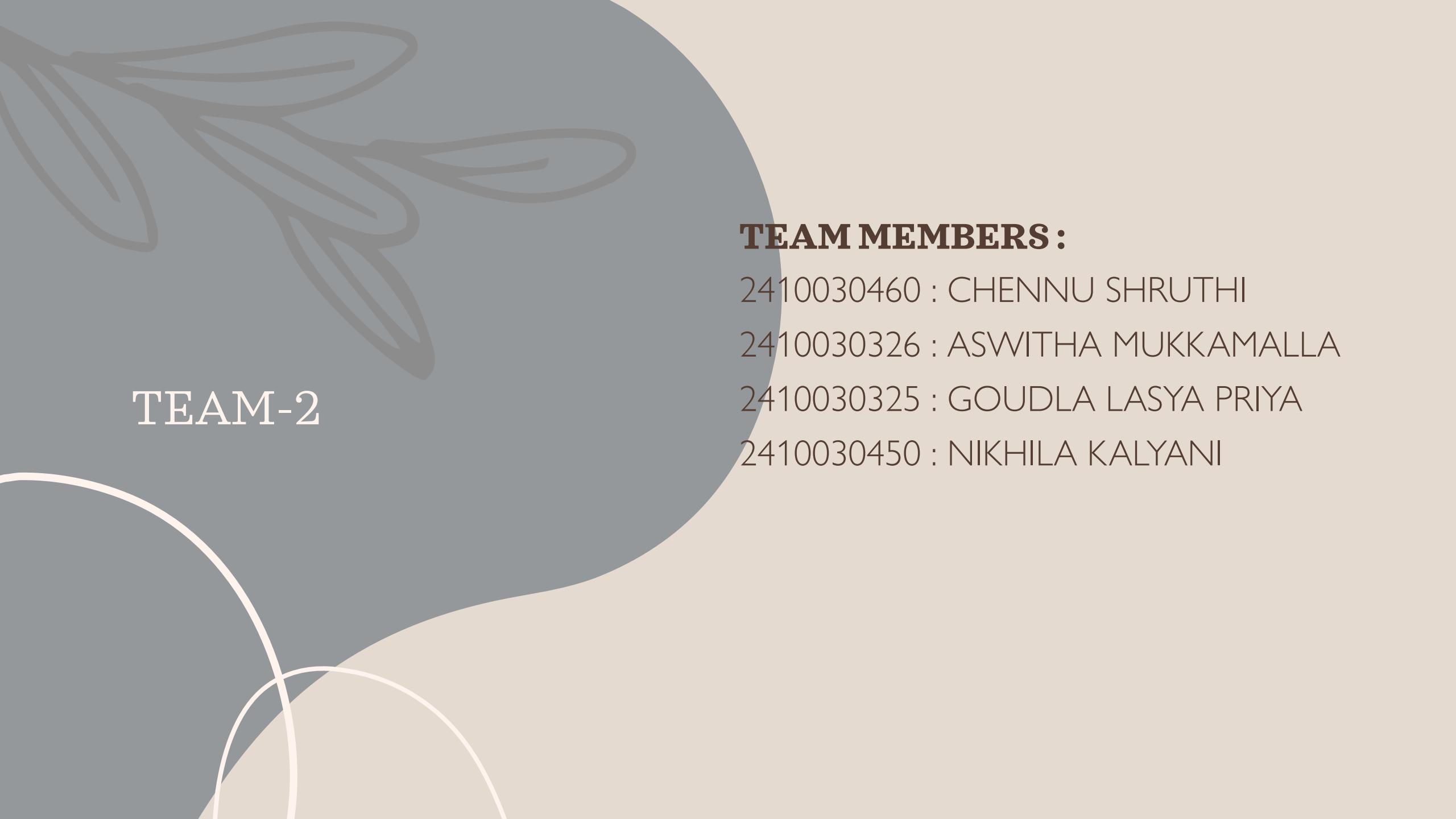# Campus Placement Intelligence & Skill Gap Analyzer

TEAM-2

TEAM MEMBERS :

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Problem Statement :

- Campus placement systems still depend on manual resume screening and fixed eligibility rules.
- There is a gap between what students learn in college and what industries actually need.
- Students are unaware of their skill gaps, and placement cells struggle to match the right student to the right job.

Proposed Solution:

- An AI-based platform that analyzes student profiles, resumes, and job requirements.
- It identifies skill gaps, predicts placement readiness, and suggests suitable job roles.
- The system provides personalized guidance to students and data-driven insights to institutions.

PROJECT OBJECTIVES

- To analyze student skills using AI and Machine Learning techniques.

- To identify skill gaps based on current industry job requirements.

- To predict placement readiness of students.

- To recommend suitable jobs, internships, and learning paths.

- To help placement cells make faster and better decisions.

Project Description

• This project is an AI-driven campus placement intelligence platform.

• It collects data such as student resumes, academic details, skills, and job descriptions.

• Using NLP, the system extracts skills from resumes and job postings.

• Machine learning models analyze the data to find skill gaps and predict placement chances.

• The platform provides dashboards for students and placement officers to track progress

Project Modules

1. Student Module
•Profile creation and resume upload
•Skill analysis and placement readiness score
•Personalized job and skill recommendations

2. Placement Officer Module
•View student analytics and skill gap reports
•Monitor placement readiness and trends
•Improve training and placement strategies

3. Job & Skill Analysis Module
•Job description analysis using NLP
•Skill matching and gap identification
•Job role recommendations

4. Admin Module
•User management
•System monitoring and data control

Tools & Technologies

Hardware Requirements:

•Laptop or Desktop
•Minimum **8 GB RAM** *(16 GB recommended for ML model*
•**Intel i5 / Ryzen 5** or equivalent processor
•Stable Internet connection

Software Requirements:

• Frontend: HTML, CSS, JavaScript (React),JSX
• Components, props, state
• React Hooks (usestate, useEffect)
• Context API/Reduce
• UI libraries: Material UI/Bootstrap
• HTTPS client: Axios/Fetch API
• Client Strorage,sessionStorage
• Backend: Python (Flask / Django)
• Database: MySQL / MongoDB
• AI/ML Libraries: Scikit-learn, TensorFlow
• NLP Libraries: NLTK, SpaCy

Backend Technologies
•Java (JDK 17 or above)
•Spring Boot
•Spring MVC
•Spring Data JPA
•Spring Security (JWT-based authentication)
•Spring AOP
•RESTful Web Services
•Global Exception Handling (@ControllerAdvice)
•Email Service (Spring Mail)
•File Uploads (Multipart Requests)

Database & ORM Technologies
•MySQL / PostgreSQL
•Hibernate (JPA Implementation)
•CRUD Operations
•Entity Relationships
•Fetch Types & Cascade Types
•ID Generation Strategies (AUTO, IDENTITY, SEQUENCE)
•JPA / JPQL
•HQL
•DTOs & Model Mapper

How This Project Is Unique

- Uses AI instead of manual resume screening.

- Provides **personalized guidance** for each student.

- Predicts placement readiness before actual interviews.

- Helps institutions align training with real industry needs.

- Supports data-driven decision-making for placement cells.

Feasibility of the Project

- Uses easily available tools and open-source libraries.

- Data such as resumes and job descriptions are easily accessible.

- Can be implemented in phases (modules).

- Scalable and suitable for real college placement systems.

- Technically and economically feasible for academic implementation.

CONCLUSION:

- The Campus Placement Intelligence & Skill Gap Analyzer improves traditional placement systems using AI.

- It helps students become industry-ready by identifying skill gaps early.

- Placement cells benefit from automated analysis and better candidate-job matching.

- Overall, the project creates a smarter, fairer, and more efficient campus placement process.

thank you