MentorWave: AI-powered Alumni Network
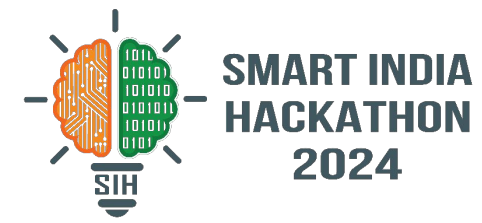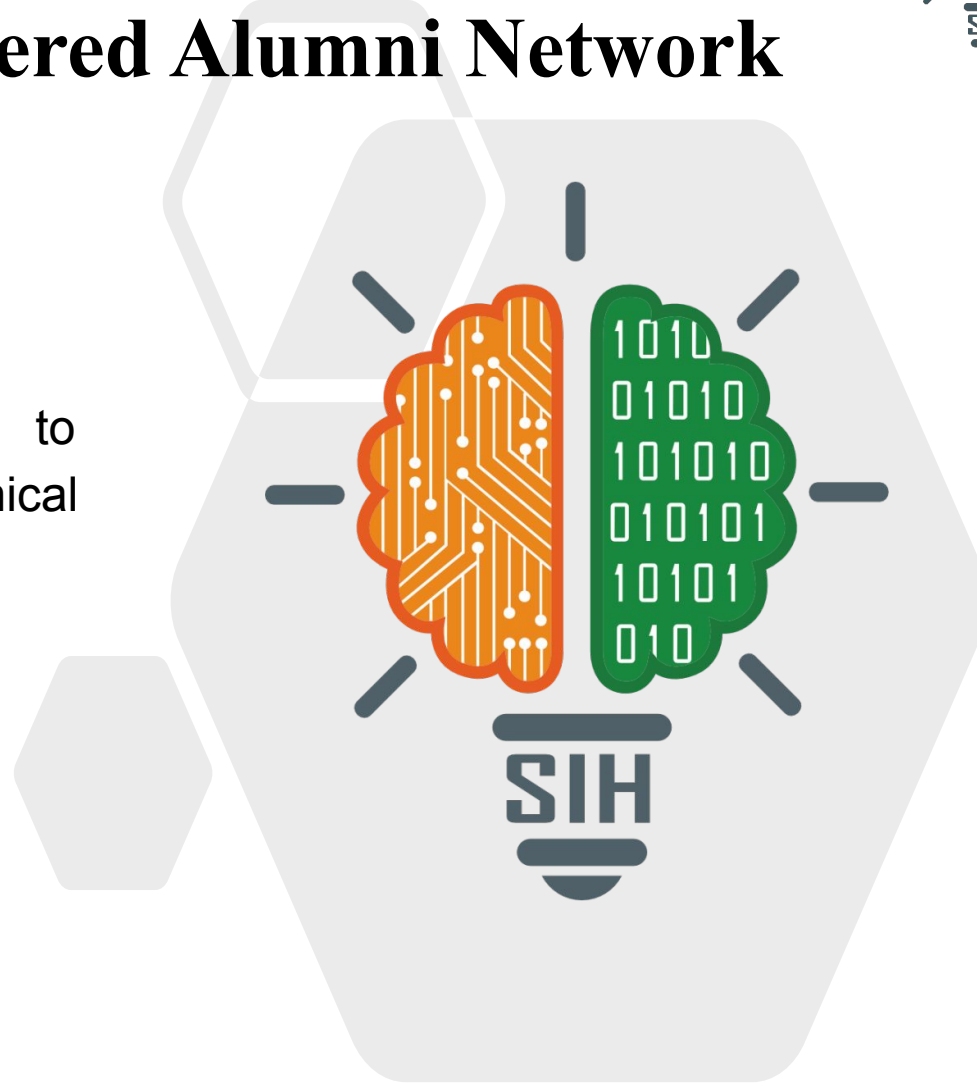
- **Problem Statement ID –** 1633

- **Problem Statement Title-** Intelligent platform to Interconnect Alumni and Student for Technical Education Department, Govt. of Rajasthan

- **Theme-** Smart Education

- **PS Category-** Software

- **Team ID-**

- **Team Name (Registered on portal)**

MentorWave

❖ **Proposed Solution**

- **Detailed explanation of the proposed solution**

    A digital platform that connects alumni with current students that features a *centralized AI-driven database, discussion forums, mentorship programs, and career guidance*. Blockchain technology ensures secure profiles, while AI provides personalized recommendations and content moderation. The platform organizes events like webinars and meetups to foster engagement and professional development, addressing gaps in structured interaction and career support.

- **How it addresses the problem** :
    - Bridging the Alumni-Student Gap
    - Mentorship & Career Advice
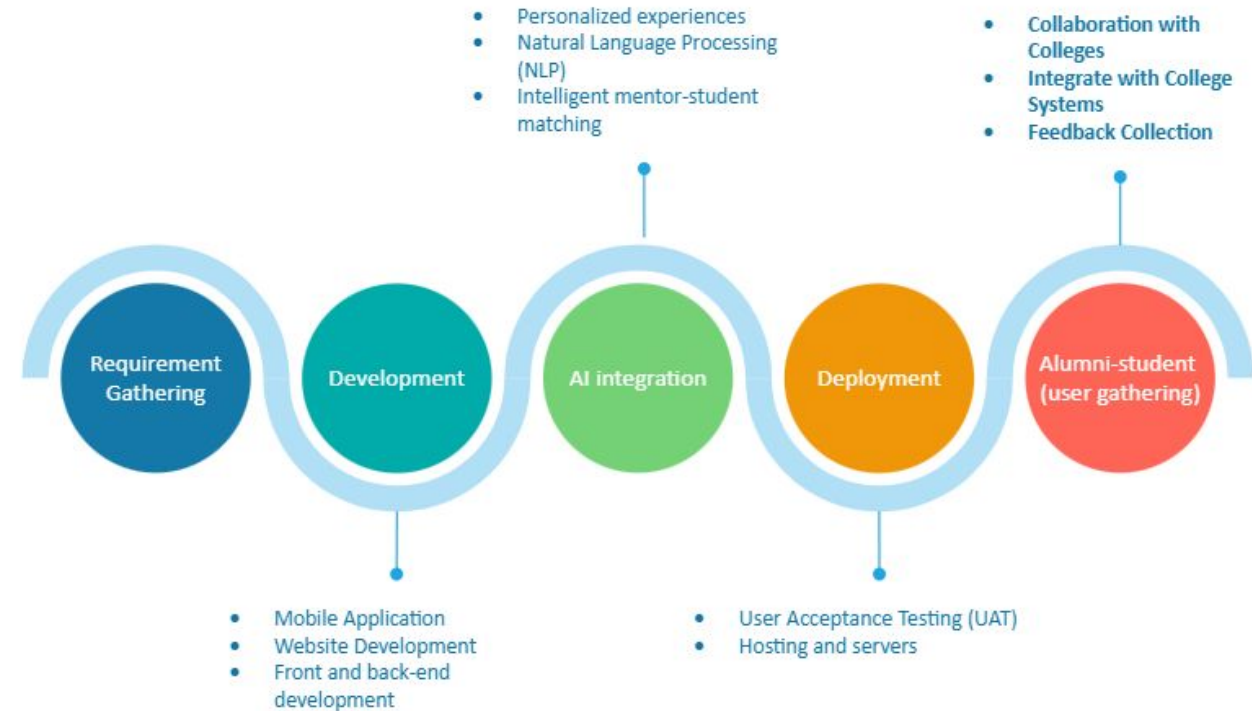- **Innovation and uniqueness of the solution**
    - **AI-Powered Matching System**: The platform will use AI algorithms to match students with relevant alumni based on interests, academic performance, and career goals.
    - **AI chatbot** : to answer common questions, general guidance and helps in using the app
    - **Harmful content Blocker** : process the texts, public conversation and images and blocks the harmful content
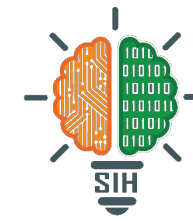
TECHNICAL APPROACH

Programming :

1) Mobile App Development:
   a) kotlin
   b) swift
   c) flutter
2) Web Development:
   a) html , css , js
   b) nodejs
3) Ai integration:
   a) tensorflow
   b) NLP

tools:

1) android studio & xcode
2) google colab for ai
3) llama model

- Personalized experiences
- Natural Language Processing (NLP)
- Intelligent mentor-student matching

- Collaboration with Colleges
- Integrate with College Systems
- Feedback Collection

Requirement Gathering — Development — AI integration — Deployment — Alumni-student (user gathering)

- Mobile Application
- Website Development
- Front and back-end development

- User Acceptance Testing (UAT)
- Hosting and servers

FEASIBILITY AND VIABILITY

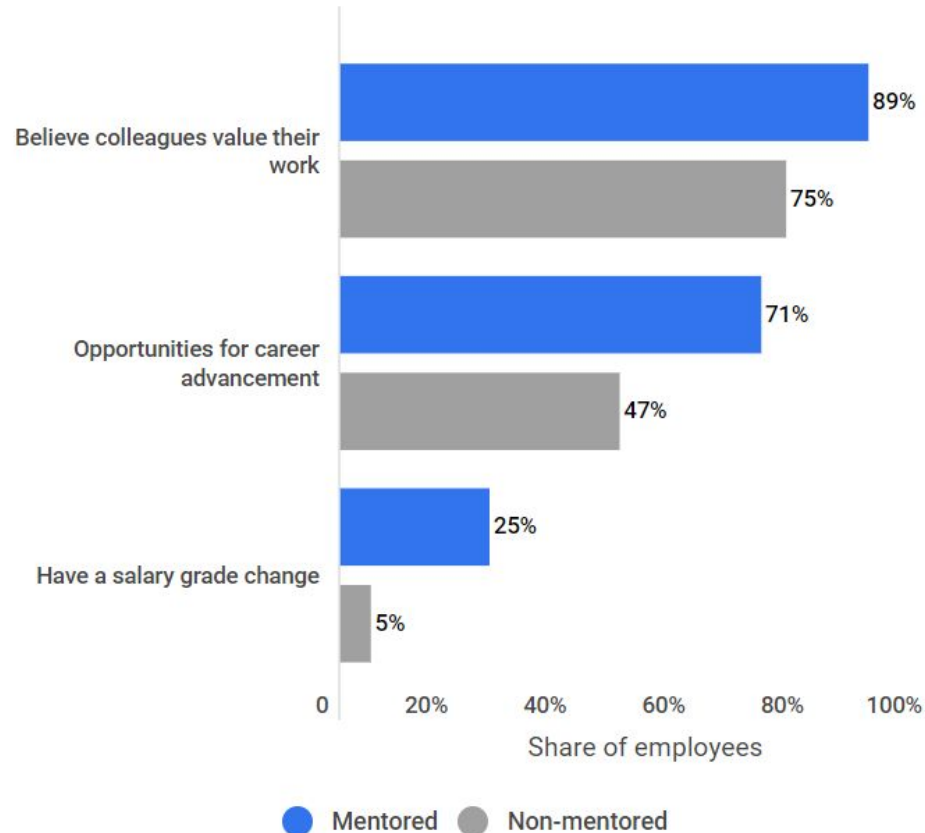## Problems to tackle:
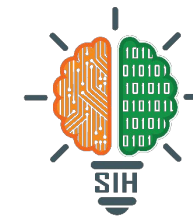
1) making alumni and student to use the app/software

2) constant engagement of users

3) data privacy

4) fraudulent activities

strategies to overcome the problems:

1) targeted outreach campaigns through colleges and alumni associations.
2) Use personalized notifications, regular content updates, and gamification (e.g., badges or rewards) to keep users active.
3) Implement strong encryption, secure login using blockchain.
4) providing master control to respective college admins to review.
5) Use AI-driven fraud detection, identity verification (e.g., college email validation), and report/block features. Monitor suspicious activity patterns closely.

IMPACT AND BENEFITS

- **68% of students** with mentors secured full-time jobs within six months of graduation, compared to only **45%** of students without mentors.
- **77% of students** in mentorship programs noted increased confidence in managing their own projects and people.
- Students with mentors are **55% more likely** to develop time management skills, and **45% more likely** to develop effective communication skills.

- https://www.linkedin.com
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7372684/#:~:text=In%20engineering%20and%20medical%20colleges,%25)%20had%20very%20severe%20depression.
- https://www.researchgate.net/publication/367090752_The_Role_of_a_Mentor_in_Students'_Personal_Growth_Academic_Success_and_Professional_Development
- https://www.researchgate.net/publication/281810041_Impact_of_Unemployment_on_Engineering_Graduates_in_Recession