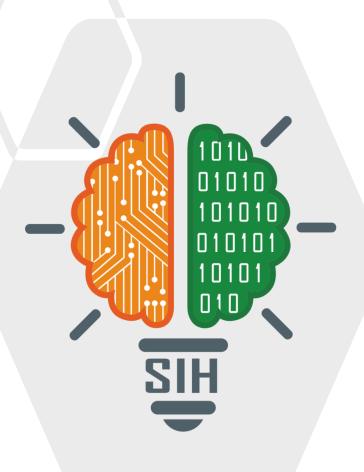
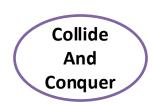
SMART INDIA HACKATHON 2024



- Problem Statement ID 1630
- Problem Statement Title- Mentor Connect
- Theme- Smart Education
- PS Category- Software
- Team ID-
- Team Name- Collide and Conquer





Interactive and Targeted Mentorship for Students and Professionals



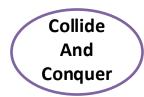
 A dynamic mentorship platform leveraging Al and upvoting to deliver targeted guidance and workshops-

Detailed explanation:

- •Upvoting System: Mentees spotlight key challenges within set time frames.
- •AI Insights: Employs ML algorithms to refine top issues from upvotes and transcripts, driving Focused Group Mentorship.
- •Open Workshops: Regular expert-led sessions accessible to all.
- •AI Recommendations: Suggests relevant topics and resources for deeper engagement.
- •First Request Offer: Discounted or free with mandatory DigiLocker Aadhar verification for all features (except open workshops) to ensure security and prevent discount abuse.

Innovation and uniqueness of the solution:

- •Quality Assessment: A brief mentor-mentee interaction may be less productive, as mentors might lack incentives to engage fully. AI tools can evaluate the interaction quality to ensure fair charges.
- •Real-Time Relevance: Data-driven insights ensure timely, actionable mentoring based on current challenges.
- •Secure Verification : Automated DigiLocker Aadhar verification employs cryptographic methods and secure protocol to ensure tamper-proof authentication.



TECHNICAL APPROACH



Technologies to be used:

Programming Languages: Python, JavaScript.

Frameworks and Libraries: TensorFlow/PyTorch, React.js, Node.js/Express.

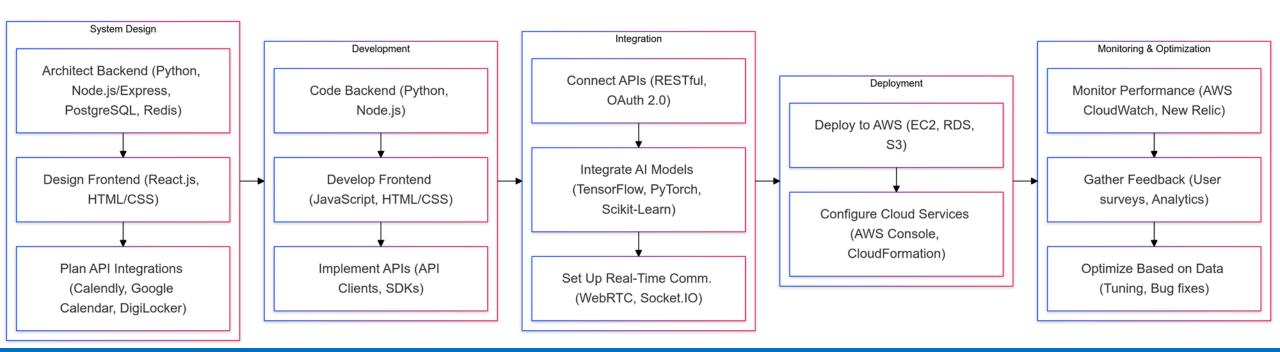
Databases: PostgreSQL, Redis.

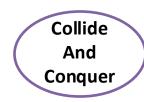
Al and ML Tools: Scikit-Learn, NLP.

Real-Time Communication: WebRTC, Socket.IO.

Verification and Security: PKI, OAuth 2.0, DigiLocker API.

Calendar, File Management and Cloud Services: Google Calendar API, AWS S3, AWS.





FEASIBILITY AND VIABILITY



Feasibility Analysis:

Feasibility: Technically achievable with Python, JavaScript, and AI/ML tools. Scalable architecture supports future growth. Integration with APIs and frameworks ensures smooth operation and adaptability.

Market Feasibility: Bridges the gap between college students and industry professionals, targeting an underserved market.

Financial Feasibility: Premium features and workshops, personalized through AI/ML insights, drive sustainability. Costs are manageable with cloud services' pay-as-you-go models.

Challenges and Risks:

Data Privacy: Safeguard user data with advanced security measures like PKI and OAuth to ensure compliance with data protection regulations.

Integration Complexities: Address potential integration issues with streamlined processes and clear documentation.

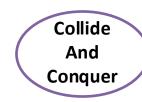
User Adoption: Overcome adoption hurdles by focusing on a user-friendly interface and ongoing user engagement.

Strategies:

Security: Deploy advanced cryptographic techniques and secure authentication protocols (PKI, OAuth 2.0) to safeguard user data and comply with privacy regulations.

Integration: Utilize a modular approach to system integration, supported by detailed API documentation and automated testing, to streamline integration and minimize potential issues.

User Experience: Focus on delivering a highly intuitive and user-centric interface, supported by continuous feedback loops and iterative design improvements, to drive higher user engagement and satisfaction.



IMPACT AND BENEFITS



Potential impact on the target audience-

Enhanced Career Development: Offers personalized mentorship and targeted skill-building, boosting job readiness and career growth.

Improved Networking: Connects students and professionals with industry experts, expanding their professional networks and opportunities.

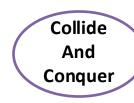
Increased Accessibility: Provides virtual mentorship and flexible scheduling, ensuring high-quality guidance is available regardless of location.

Benefits of the solution (social, economic, environmental, etc.)-

Social: Fosters community and networking between students and industry professionals, enhancing collaboration and knowledge sharing.

Economic: Generates revenue through premium features and workshops. Equips mentees with relevant skills and knowledge, leading to better job opportunities and career advancement. Additionally, mentors benefit economically by gaining a new platform for paid mentorship, further contributing to employment growth.

Operational Efficiency: Streamlined scheduling and secure interactions increase overall platform efficiency and user satisfaction.



RESEARCH AND REFERENCES



- 1. L. Terrion, J., & Leonard, D. (2007). A taxonomy of the characteristics of student peer mentors in higher education: Findings from a literature review. Mentoring & Tutoring, 15(2), 149-164.
- 2. https://www.birchwoodu.org/what-are-the-opportunities-and-challenges-for-ai-in-education/
- 3. <a href="https://www.forbes.com/councils/forbestechcouncil/2024/06/04/next-gen-education-8-strategies-leveraging-ai-in-learning-platforms/#:~:text=Personalized%20Learning%20Paths&text=AI%20systems%20use%20students'%20learning,grasp%20and%20mastery%20of%20ideas.
- 4. https://www.zonkafeedback.com/blog/ai-feedback-loop#:~:text=An%20AI%20feedback%20loop%20is,and%20learns%20from%20the%20results.
- 5. https://www.softwebsolutions.com/resources/ai-driven-adaptive-learning.html#:~:text=How%20AI%20impacts%20personalized%20education%20and%20real%2Dlife%20examples&text=AI%2Ddriven%20adaptive%20learning%20significantly,reducing%20frustration%20and%20increasing%20confidence.
- 6. https://elearningindustry.com/natural-language-processing-in-automated-feedback-for-elearning#
- 7. https://dacostacoaching.co.uk/blog/how-ai-is-changing-the-face-of-coaching-mentoring-in-agencies/#:~:text=Unlike%20traditional%20mentoring%2C%20AI%20coaches,rapid%2C%20data%2Ddriven%20insights.
- 8. https://www.oreilly.com/library/view/practical-nodejs-building/9781430265962/
- 9. https://madavi.co/edtech-data-privacy-and-security-5-best-practices/#:~:text=Students%20have%20the%20right%20to,and%20delete%20their%20own%20data.
- 10. https://www.centedge.io/post/building-a-scalable-production-grade-webrtc-video-calling-app
- 11. Johnson, A. M., Jacovina, M. E., Russell, D. G., & Soto, C. M. (2016). Challenges and solutions when using technologies in the classroom. In S. A. Crossley & D. S. McNamara (Eds.), *Adaptive educational technologies for literacy instruction*(pp. 13-29). New York: Taylor & Francis.
- 12. https://www.nylas.com/blog/best-calendar-apis/
- 13. https://medium.com/@solguruz/what-are-the-monetization-strategies-for-an-edtech-app-c98e942d2e93