

Basic Details of the Team and Problem Statement

Ministry/Organization Name/Student Innovation: Government of Jharkhand

PS Code: SIH1502

Problem Statement Title: Blended Learning to overcome inadequate infrastructure

Team Name: Lakshya

Team Leader Name: Saransh Mishra

Institute Code (AISHE): C-35931

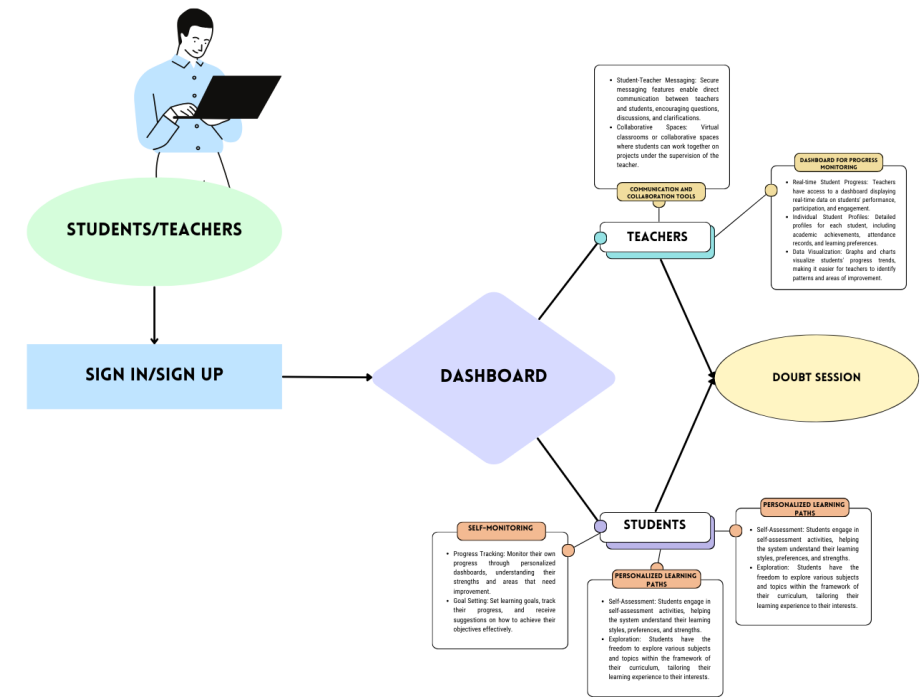
Institute Name: Baderia Global Institute of Engineering and Management

Theme Name: Smart Education

Idea/Approach Details

SOLUTION/DESCRIPTION

- Developed an intuitive online platform where students have personalized learning paths. Adaptive algorithms analyze real-time performance data, suggesting tailored lessons and resources.
- Equiped teachers with a dashboard providing insights into student progress. This aids in targeted interventions, ensuring no student is left behind.
- Facilitates educators in crafting engaging digital content, including videos, simulations, and interactive quizzes, enhancing the learning experience.
- Implemented a rotational model, where students alternate between direct teacher interaction, online tasks, and collaborative projects. This ensures diversified learning experiences for all.
- Utilize cloud computing for scalable and reliable hosting. Cloud services ensure seamless access to the platform, irrespective of the user's location or device.



Technology stack

- Frontend Development (React.js, Redux, HTML5, CSS3, JavaScript)
- Backend Development (Node.js/Python, Express.js, Django)
- Database (PostgreSQL/MySQL/MongoDB, Blockchain)
- Real-time Funtionality(Web socket, socket.io)
- Ai & Machine Learning(TensorFlow or PyTorch, Scikit-Learn, NLP)
- IOT Integration(Raspberry Pi/Arduino)
- Cloud Services(Amazon Web Services (AWS) or Microsoft Azure)
- Real-Time Updates and Notifications (WebSockets)
- Security Measures (SSL/TLS, Oauth, OWASP ZAP)
- Collaboration and Version Control(Git/GitHub)

Idea/Approach Details

USE CASES

- **Simulations and Virtual Labs:** Engages in virtual science experiments and simulations, allowing students to grasp complex concepts through interactive, hands-on experiences.
- **Educational Gamification:** Learning modules integrated with game elements motivate students, making the learning process fun and immersive while ensuring educational objectives are met.
- **Automated Assessments:** Takes quizzes and tests online with instant grading and detailed feedback, enabling students to understand their mistakes and improve their knowledge.
- **360-Degree Feedback:** Provides feedback on course materials, teacher effectiveness, and overall learning experience, contributing to continuous improvement.
- **Assistive Technologies:** Specially-abled students access custom interfaces, such as screen readers and speech recognition, ensuring an inclusive learning environment catering to diverse needs.
- **Individualized Support Plans:** Implements individualized education plans (IEPs) for students with specific learning requirements, offering tailored resources and support strategies.
- **Progress Updates:** Parents receive regular updates on their child's academic progress, attendance, and participation, fostering a collaborative relationship between parents, students, and teachers.
- **Parent-Teacher Conferences:** Schedule virtual parent-teacher conferences, allowing parents to discuss their child's progress, challenges, and goals directly with teachers.

DEPENDENCIES

- **Stable Internet Connection**
- **Collaboration with Schools and Institutions**
- **Digital Infrastructure**
- **Content Creation and Curation**
- **Data Security and Privacy**
- **Training and Support**

Team Member Details

Team Leader Name: Saransh Mishra

Branch : Btech

Stream : CSE

Year : III

Team Member 1 Name: Vedika Pathak

Branch : Btech

Stream : CSE

Year : III

Team Member 2 Name: Dhvani Sahu

Branch : Btech

Stream : CSE

Year : III

Team Member 3 Name: Abhishek Tiwari

Branch : Btech

Stream : IT

Year : III

Team Member 4 Name: Mridul Singh

Branch : Btech

Stream : CSE

Year : III

Team Member 5 Name: Ayush Vishwakarma

Branch : Btech

Stream : CE

Year : III

Team Mentor 1 Name: Prof. Abhishek Singh

Category : Academic

Expertise : AI/ML

Domain Experience : 14 years

Team Mentor 2 Name: Prof. Jayesh Jain

Category : Academic

Expertise : Database

Domain Experience : 14 years