



**Baderia Global Institute of Engineering and
Management, Jabalpur, Madhya Pradesh 482002**



BrahmaX 1.0

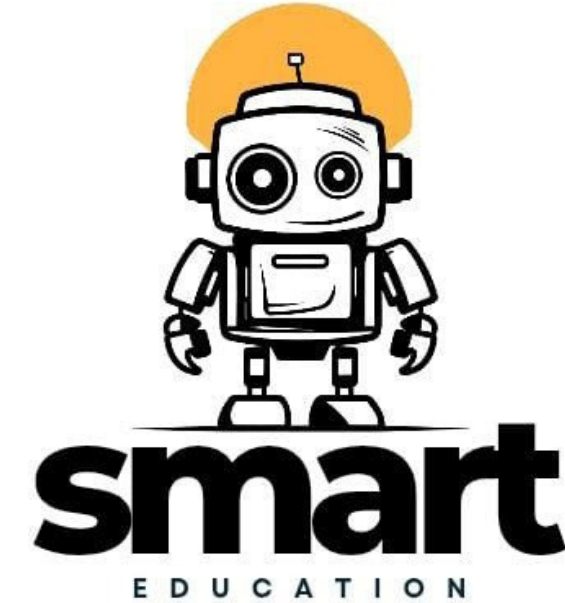
The Creation of Tomorrow

BrahmaX 1.0

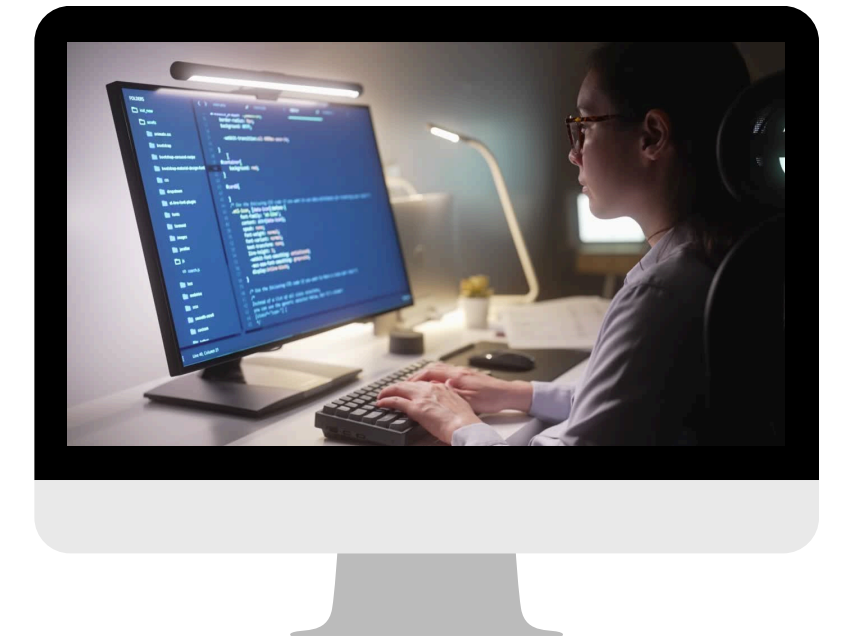
www.codecrax.com

Team Vission 3.0

Profile Overview



- **Theme** - EdTech
- **Problem Statement Title**- Real-Time Collaboration in Virtual Learning Labs
- **Team ID** - UOJ9U117
- **Team Name** - Team Vission 3.0





Solution Overview

- A next-gen virtual learning lab for collaborative coding, integrated with AI-powered guidance and asynchronous expert mentorship.
- First step in building CENTRIQA — a complete career, learning, and mentorship platform.

Problem-Solving

- Real-time code collaboration (multi-user)
- AI code assistant: suggestions, debugging, auto-complete
- Mentor-as-a-service: industry expert feedback asynchronously
- Integrated learning with future AR/VR, freelancing, and analytics support

Innovation

- Combines Google-Docs-style collaboration with GitHub-style versioning + AI suggestions
- Seamless transition from classroom to real-world projects with AI and mentor feedback
- Future-ready integration of AR/VR, freelancing marketplace, and blockchain credentialing

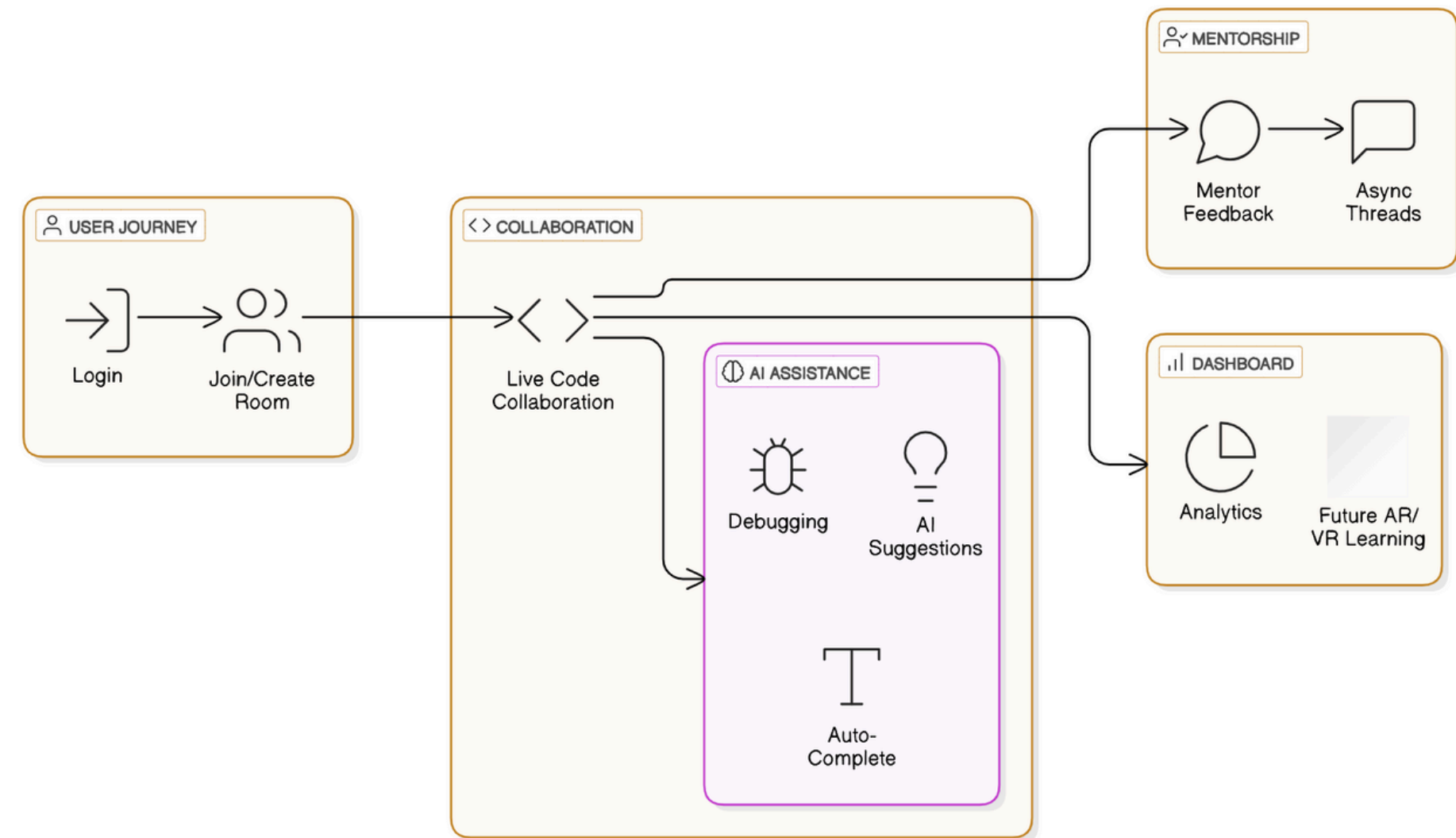


Tech Stack

- Frontend:** HTML, CSS, JavaScript, Next.js 15, Tailwind CSS
- Backend:** PHP, Node.js
- AI/ML:** Python, TensorFlow, Google Cloud AutoML
- Blockchain:** Ethereum
- Database:** MySQL, PostgreSQL, Firebase Realtime DB
- Chatbot & AI Assistance:** Google Gemini API
- Additional Tools & Libraries:** VS Code, Monaco Editor

Flow Chart Diagram

CENTRIQA Virtual Learning Lab Workflow





Feasibility

- Web-based, minimal setup
- Supports async and live learning
- Modular: future add-ons like freelancing or blockchain possible

Challenges

- Real-time sync and latency
- AI suggestion accuracy
- Scalability in low-bandwidth areas
- Mentor response delays

Mitigation

- Use Firebase + Socket.IO for efficient sync
- Fine-tune AI with user feedback
- Design for offline-first/low-data usage
- Notification system & mentor time-blocks

IMPACT AND BENEFITS



Team Vission 3.0

Target Audience

- College/university students
- Mentors, alumni, industry professionals
- Educational institutions

Key Highlights

- Empowers peer learning & mentorship
- Fosters coding confidence with AI help
- Increases employability & practical exposure
- Seamlessly extends into job & freelancing readiness

Long-term value

- Foundation of CENTRIQA:
- AI-powered student analytics
- Freelancing + job marketplace
- Alumni-student mentorship
- AR/VR learning modules
- Blockchain-verified certifications
- Mobile app for anytime learning



- “AJBSR,Development of Intelligent Alumni Management System for Universities,2021”.

View Here : [Read](#)

- ELSEVIER, “Prof.Commerce and Accountancy Faculty, Chulalongkorn University, Bangkok 10330, Thailand ”,
WCETR- 2014 Innovation System on Quick Response.

View here : [Read](#)

- ICCS 2012 Enhancing Mentoring between Alumni and Students via Smart Alumni System, Hongmei Chi,aFlorida
A&M University, Tallahassee, FL 32307-5100, U.S.A

View Here :_[Read](#)

- Benilda Eleonor V. Comendador, Wilmarie Faye C. Becbec and J. R. P. D. Guzman, Selecting suitable job career by
alumni approach, pp. 339-345, 2020

View Here : [Read](#)