Rajat Bansal

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EDUCATION

VIT Bhopal University (8.68/10)

B.Tech, CSE (Cloud Computing and Automation)

Bhopal, MP August 2026

SKILLS

Languages: Java, SQL, HTML, CSS, JavaScript

Backend: Node.js, Express.js, RESTful APIs, Prisma

Cloud: AWS (EC2, S3,RDS)

Frontend: React.js, Next.js, TailwindCSS

Databases: MongoDB, MySQL

Tools: Git, GitHub

PROJECTS

SkillSync: AI-powered Partner Matching Platform Next.js, MySQL, AWS, DevOps

May 2025

- Engineered an AI matchmaking engine that parsed and vectorized 20+ profiles from GitHub and resumes to quantify technical skills, successfully matching over 30 users with 85 percent compatibility rating
- Orchestrated a fully containerized deployment on AWS EKS using Kubernetes, establishing a CI/CD pipeline that reduced deployment times by 60 percent and ensured high availability with 99.9 percent uptime.
- Implemented a dynamic feedback loop using a **Bayesian model** to refine user scores post-collaboration, creating an adaptive matching ecosystem that improved accuracy by 23 percent over time.

MockVerse: Mock Interview Platform Next.js, FastAPI, PostgreSQL, Gemini AI API, AWS

May 2025

- Architected a full-stack AI platform designed for scalable, real-time interview simulations, with sub-300ms API response times using microservices architecture.
- Created a dynamic interview engine leveraging Google's Gemini LLM with advanced prompt engineering to generate context-aware, role-specific questions achieving 94 percent user satisfaction rate.
- Forged a bidirectional audio stream integrating browser-native Web Speech API for real-time STT and TTS, enabling fully conversational experience with 94 percent transcription accuracy
- Crafted a feedback generation service that processes interview transcripts via an LLM to provide structured, actionable analytics, with session data persisted in a PostgreSQL database.

Carpool: Seamless Car-Sharing And Rental Solutions HTML, CSS, JavaScript, Python

October 2024

- Architected and led the full-stack development of a comprehensive ride-booking and rental platform, focusing on optimizing user experience (UX) across all critical functionalities, from search to transaction processing.
- Streamlined backend microservices and data pipelines to facilitate efficient deployment, ensure high scalability, and significantly enhance system performance for anticipated user growth and engagement metrics. and engagement.
- Engineered a highly intuitive and fully responsive front-end interface, leveraging modern web development paradigms to maximize user accessibility and engagement across diverse device form factors.

CO-CURRICULAR

- Cloud Computing AWS Educate. Cloud Solution Design (IBM SkillsBuild).
- Open Source Contributor Contributed in SSOC and GSSOC
- Full-Stack- Development with MERN SmartBridge Certified
- MongoDB Node.js Developer Path -Backend and database skills with MongoDB and Node.js

EXTRA CURRICULAR

- Co-Lead of Content Team, Mozilla Firefox Club: Directed content creation and strategy for 10+ club initiatives, developing technical documentation and tutorials that attracted 500+ unique users.
- Tech Co-Lead, BashCraft Club: Hosted 15+ technical workshops and coding events, empowering 200+ members to build expertise in web development, algorithms, and system design while managing workshop logistics and curriculum development.
- Member, NSS:Participated in community service projects promoting social impact and teamwork, contributing 50+ volunteer hours in rural education initiatives and environmental awareness campaigns.