

Ketan Bajpai

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EDUCATION

Indian Institute of Information Technology, Nagpur

Nagpur

Bachelor of Technology in Electronics and Communication Engineering,

Nov. 2022 – June 2026

Specialization in Internet of Things CGPA: 8.03/10

EXPERIENCE

SDE/GenAI Intern | Oct 2025 – Present | **iKITES TECHNOLOGIES PRIVATE LIMITED**

- Currently leading the development of the **Stanford Dashboard**, a comprehensive analytics platform designed for longitudinal ophthalmic data visualization and analysis.
- Building the full-stack architecture using **React (Vite)**, **Flask**, **MongoDB**, and **Docker** for containerized deployment and scalable backend management.

SDE Intern | May 2025 – Oct 2025 | **iKITES TECHNOLOGIES PRIVATE LIMITED**

- Applied advanced AI infrastructure concepts to develop RAG-based chatbots using hybrid retrieval (keyword + semantic), Reciprocal Rank Fusion (RRF), modular RAG pipelines, query expansion, and multi-strategy chunking integrated with knowledge graphs for improved context relevance and reranking.
- Developed a full-stack dashboard for ophthalmologists using **React** (frontend) and **Python** (backend) with Google Authentication, centralizing diverse patient reports for streamlined analysis and improved clinical workflow.

PROJECTS

Career Guidance Chatbot (RAG-based) | *Next.js, Clerk, Qdrant, Gemini, Node.js* [[GitHub](#)]

- Built a full-stack AI-powered chatbot using Retrieval-Augmented Generation (RAG), integrating Qdrant vector database for semantic search with hybrid retrieval (keyword + vector) and reranking techniques.
- Developed dynamic chat interface with Google Auth (Clerk), allowing persistent chat history, GPT-style new chat creation, and secure user session handling.

Inventory Management System | *Flask, MongoDB, React.js, Docker* | [[GitHub](#)]

- Built a full-stack inventory system with Flask backend, MongoDB, and React frontend.
- Implemented JWT-based authentication, unique SKU enforcement, and paginated APIs.
- Containerized backend with Docker for easy deployment and environment management.

Real-Time Chat Application | *Node.js, Express.js, Socket.IO, JSON Web Token, MongoDB, React.js* | [[GitHub](#)]

- Developed a real-time chat application featuring online/offline status updates using Socket.IO.
- Integrated JSON Web Token-based authentication with MongoDB for secure user management.
- Designed the React frontend and managed state with Zustand.

Cloud Vault | *AWS S3, CloudFront, AWS Serverless, Next.js, Postgres* | [[GitHub](#)]

- Engineered a cloud-based file management system with functionalities for folder creation, sharing, and deletion.
- Integrated AWS S3 for file uploads and a payment gateway for storage upgrades beyond 10GB.
- Optimized performance using AWS CloudFront for rapid content delivery.

TECHNICAL SKILLS

Programming Languages: C++, Python, Java, SQL.

Frameworks & Technologies: React.js, Next.js, Node.js, Flask, Express.js, RestAPI

Developer Tools: Docker, GitHub, Postman, Visual Studio Code, Cisco Packet Tracer, Unix/Linux.

Databases & ORM: MongoDB, PostgreSQL, MySQL, Prisma, Sequelize.

Coursework: Data Structures and Algorithms, Database Management Systems (DBMS), Object-Oriented Programming (OOP), Machine Learning, Communication Networks, IOT Security, Distributed Systems.

ACHIEVEMENTS

LeetCode: Solved 400+ coding problems, significantly enhancing algorithmic and data structure skills.

CodeChef: Achieved a 3-star rating (Peak Rating: 1631).

IIT Roorkee E-Summit 2024: Finalist in the Business Case Study Competition, demonstrating strong analytical and presentation skills.