KAUSHAL SENGUPTA

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TECHNICAL SKILLS

- Programming Languages: Python, JavaScript,C++
- Web Development: MongoDB, Express.js, React.js, Node.js (MERN Stack) Docker Redis
- Frameworks & Libraries: Flask, Socket.io, Tailwind CSS, ChakraUI
- AI/ML: LLM Fine-tuning, Vector Embeddings, Sentence Transformers
  Tools: Git, REST APIs, JSON Web Token, Streamlit

EDUCATION

- VIT Bhopal, Madhya Pradesh 2022 – Present
  B.Tech. Computer Science Engineering
  CGPA: 8.01
- Kendriya Vidyalaya, NERIST   2020
  Class 12
  Result: 89%
- Kendriya Vidyalaya, NERIST   2019
  Class 10
  Result: 81%

Work Experience

Cyber Club Event Management Platform *(Volunteer Work)*
MongoDB, Express.js, React.js, Node.js

- Developed and maintained a website for event registrations and ticket generation.
- Implemented secure authentication, ensuring seamless participant access.
- Automated ticket generation and email delivery, cutting manual effort by 80%.
- Designed an intuitive interface, streamlining registrations by 60%.
- Optimized backend performance to handle high-traffic event sign-ups without downtime

PROJECTS

Research RAG Assistant Platform

Python, MySQL, LLM, Vector Embeddings, Sentence Transformers

- Integrated ArXiv API and Snowflake to process over 10,000 academic papers monthly.
- Implemented Mistral LLM to generate research paper drafts with 85% content synthesis accuracy.
- Developed a data extraction pipeline with pdfminer and LayoutLM, cutting manual processing time by 75%.
- Built an interactive Streamlit interface, achieving a 90% user satisfaction rate.
- Optimized vector embeddings, reducing query response time from 5 seconds to under 1 second.
- Designed an automated paper categorization system with 92% accuracy using custom ML models.

Syncflow Project Management Platform

MongoDB, Express.js, React.js, Node.js, Socket.io, Tailwind CSS

- Engineered a full-stack project management system serving 500+ active users.
- Secured user authentication with JWT, cutting unauthorized access attempts by 98%.
- Enabled real-time team chat for 100+ concurrent users with sub-100ms latency.
- Integrated a calendar system handling over 1,000 daily task assignments.
- Automated task reminders, boosting team productivity by 40%.
- Optimized API performance, maintaining 99.9% uptime with an average 200ms response time.

RailMilap Journey Planning System

Flask, React, RESTful APIs, Socket.io, Web Scraping

- Built a break journey search platform, reducing average search time by 60%.
- Implemented real-time updates with WebSockets, processing 1,000+ concurrent searches.
- Developed a web scraper aggregating data from 50+ railway websites with 98% accuracy.
- Optimized database queries, cutting response time from 2 seconds to 500ms.
- Introduced caching to reduce peak-hour server load by 40%.
- Designed a mobile-responsive interface, increasing user engagement by 45%.