Madhuram Kulshrestha

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About

Computer Science undergraduate with hands-on experience engineering machine learning models, backend systems, and cloud-based APIs. Architected and implemented ML pipelines using Python, Scikit-learn, and TensorFlow. We developed RESTful APIs with Flask and launched them in Render, driving significant reductions in latency and enhancing system performance. **Proficiency in Python, SQL, Node.js,** and **MongoDB**. Participated in National/International Hackathons and delivered multiple applied software engineering projects.

Education

VIT Bhopal University, B.Tech. in Computer Science and Engineering — July 2022 – July 2026
- GPA: 8.93/10 (Transcript)

Shanti Niketan Public School, Agra, Class XII (CBSE) — April 2020 – March 2021
- Percentage: 91.2/100 (Transcript)

St. Mary's Convent School, Agra, Class X (ICSE) — April 2018 – March 2019
- Percentage: 91.8/100 (Transcript)

Internship Experience

Data Science Intern, Sabudh Foundation (STPI) – Remote — January 2025 – July 2025
- Architected and deployed machine learning models for classification, regression, and LLM-based applications.
- Enhanced model accuracy by applying feature engineering and cross-validation methodologies.
- Leveraged AWS Lambda for efficient data management and Flask APIs for robust deployment.

Projects

Scalable Chatting Web Application using Kafka and Socket.IO — GitHub Link
- Developed a scalable real-time chat app using Socket.IO and Kafka for fast, reliable messaging.
- Integrated JWT auth, Google OAuth 2.0, Leveraged Redis caching to ensure high performance and low latency

Videotube – Video Streaming Dashboard — GitHub Link
- Constructed back-end for a YouTube-style platform using Flask and MongoDB.
- Real-time video uploads, dynamic content rendering, and user engagement tracking.

Technologies

Languages: Python, SQL, Node.js, C++, Java
Framework/Tools: Node.js, Next.js, React.js, Typescript, Redis, Kafka, Socket.io
Database System/Data Tools: MySQL, MongoDB, Tableau, Excel

Hackathon Experience

TCS CodeVita 2024: Secured AIR-671 in Round 2, beating 200,000+ participants from over 3,500 institutions.
International Innovation Challenge 2024: Ranked Top 30 teams globally in a 36-hour innovation hackathon.

Achievements

- **Problem Solving Proficiency:** Top 5 percent with over 230 problems solved.
- **Academic:** Perfect 10 GPA during the interim semester 2023.

Certifications

- Geodata Processing using Python – ISRO
- Python Essentials – Vidyarthi