Tanya Chaturvedi

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EDUCATION

Vellore Institute of Technology   Bhopal,M.P.
Bachelor of Technology in Electronics and Communication, spec. in A.I. and Cybernetics   *2022 – 2026*

Christ Church Girls' S.S School   Jabalpur,M.P.
X-89% (2019) XII- 85% (2021)   *2014 – 2021*

TECHNICAL SKILLS

Programming Languages: C, C++, Python, GoLang, JavaScript, SQL
Tools & Frameworks: React.js, ML, Redis, API Development, Git, PostgreSQL, Docker, Kafka, Llama3

PROJECTS

Swaasthya: A Centralised Hospital System | *Go, Kafka, Redis, PostgreSQL, Docker, Kubernetes* Oct 2024 – Present
- Engineered a hospital management system with region-based database sharding for horizontal scalability and optimized data management and containerization using Docker and Kubernetes.
- Implemented 2FA authentication for secure access by hospital staff and admins.
- Integrated Redis for IP rate limiting and smart queue management, ensuring system stability and efficient patient appointment handling.
- Utilized Kafka for batch processing to handle large volumes of data and prevent DB transaction overload, enabling efficient data routing and real-time updates.
- Deployed a microservices architecture with Kubernetes for fault tolerance and scalability, ensuring 99.9% uptime under high traffic loads.

DebateMate: AI-based Debate Coach | *FastAPI, LangChain, OpenAI GPT*   January 2025 – Present
- Architected and deployed an AI-driven real-time argument analysis system, processing 200+ debate topics daily with 99.9% uptime.
- Developed an NLP-based fallacy detection model with 85% accuracy, identifying 10+ logical fallacies (e.g., Straw Man, Slippery Slope).
- Enhanced model accuracy by 12% using Llama3, reducing false positives and increasing trust in the system.
- Optimized response generation pipeline, reducing latency by 40% and increasing user retention by 25%.
- Scaled system capacity using caching strategies and parallel processing, doubling retrieval speed for 10,000+ active debates monthly

CERTIFICATIONS

- Neural Networks and Deep Learning- DeepLearning.AI   November,2024
- Postman API Fundamentals Student Expert   December 2024

ACHIEVEMENTS

- **LeetCode** Achieved a contest rating of 1,731, with a global ranking 71,961 in the top 680,249.
- **GeeksforGeeks** : Among the top 63.86% of 34333 users **Contest Rating:** 1,698
- **Joint Secretary** BashCraft,VIT Bhopal
  - Organized a finance webinar with Zerodha on investment strategie and coordinated a fintech hackathon with 280+ participants.
  - Served as a board member of BashCraft for 2 consecutive terms
  - Managed cross-functional event planning and logistics, ensuring seamless execution of tech workshops and networking events.
- **Smart India Hackathon 2024**

  Participated with a team of 6 to victory in VIT Bhopal's internal round, competing against 400+ teams and securing a spot in national-level selections.