Shashank Tyagi

 +91 9528921966   tyagishashank118@gmail.com   LinkedIn   GitHub   Portfolio   LeetCode

Education

Indian Institute of Information Technology Nagpur   Nov 2022 – Present
Bachelor of Technology in Computer Science   *Nagpur, India*

- *Relevant Coursework:* **Data Structures and Algorithms**, **Database Management Systems**, **Computer Networks**, **Object-Oriented Programming**

Technical Skills

Languages: Python, C/C++, JavaScript, TypeScript
Web Development: React, Next.js, Node.js, Express.js, Django, Flask
Databases and ORMs: MongoDB, PostgreSQL, Redis, Drizzle, Prisma
Deep Learning & AI: Transformers, NLP(proficient), LSTM
Developer Tools: Git, Postman, VS Code, Docker, Linux
Libraries & Frameworks: Pandas, Matplotlib, Langchain, TensorFlow, PyTorch(proficient)

Projects

Realtime Collaborative Workspace   Aug 2024 – Oct 2024
Next.js 13, Drizzle ORM, Supabase, Tailwind, WebSockets, Redis, Docker

- Engineered a real-time collaborative workspace enabling multiple users to work simultaneously, incorporating real-time cursors, text selection, and presence indicators, improving team collaboration.
- Enabled real-time authentication with custom email-based 2FA and integrated payment management, improving account security.
- Utilized WebSockets to provide optimistic UI updates, real-time collaboration, and multiple cursors.
- Implemented real-time chat for collaborators using Redis and WebSockets for seamless communication while working in the shared workspace.
- Dockerized the application using a multi-stage build for optimized deployment.

Voice-Based Seller Simulation   July 2024 – Aug 2024
Next.js, TypeScript, Prisma, Vercel AI SDK, Langchain

- Built a real-time voice-driven sales-bot mimicking a salesperson, reducing response time by 30%.
- Used RAG and vector embeddings for product storage, improving recommendation accuracy with personalized suggestions via LangChain.
- Automated database queries with Vercel AI SDK, cutting latency to 0.05ms and improving access to product data.
- Designed a flexible system adapting to seller personas and managing multiple simultaneous topics.

Text-Synth   Mar 2024 – Mar 2024
Python, PyTorch, Django, JavaScript

- Implemented a Transformer architecture based on the "Attention is All You Need" (2017) research paper using PyTorch, training models to achieve 97% accuracy on sentiment analysis tasks.
- Trained models for sentiment analysis (encoder), summarization, and chat completion (decoder), and text translation (encoder-decoder).
- Built a GPT-like chat application in Django, allowing users to interact with the models in real time.
- Integrated web-socket connections to support continuous chat functionality, enhancing real-time interaction with reduction in latency.

Achievements

- CodeChef 3 Star Rated(1775 max) and Leetcode Knight(1991 contest rating) in competitive programming.
- Secured **Rank 327/32,166** in LeetCode Weekly Contest 399 and **Rank 495/30,286** in Biweekly Contest 131 by efficiently solving 3 out of 4 algorithmic problems, showcasing strong data structures and algorithms proficiency.
- Finalist in Odoo Combat 2024 Hackathon. Developed a CRM system to reduce client service time.
- Winner of Hack-4-Future Hackathon. Built a Sign Language translation app with improved accuracy.
- 1st Place at SVPCET TECHNEX'24. Developed a real-time sign language recognition system with 95% accuracy.
- **1st Place** in Bug Bounty Blitz and Genathon Hackathon at IIITN Tantrafiesta 2024. Built a tele-calling monitoring and analysis end-to-end application.