Shashank Tyagi

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Education

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

Technical Skills

Languages and frameworks: Python, go, C/C++, JavaScript, TypeScript, React, Next.js, Nestjs, Node.js, Express.js, fastAPI
Databases and ORMs: PostgreSQL, Clickhouse, drizzle, Redis
DevOps: Docker, Langfuse, AWS(Lambda, EC2, S3, RabbitMQ), Prometheus, Grafana
Developer tools: Git, Postman, VS Code, Linux

Experience

Trench.ag May 2025 – Present
Backend Developer (Solana Decentralized Exchange Platform)

- Developed a fully automated event-driven trading service with 20+ configurations, achieving transaction confirmation within 1 second and identifying triggered transactions in under 100ms, with a thread-safe, in-memory cache for high-performance data access.
- Migrated ClickHouse database to a hybrid ClickHouse and PostgreSQL schema, reducing average API response time by 70% through optimized read queries.
- Built upstream Go services to ingest Solana blockchain transactions within 15ms, using gRPC for high-concurrency processing.

Heizen (Opengig) Feb 2025 – may 2025
SDE Intern (Remote)

- Led backend development of multi-agent GenAI applications for Heizen's internal developer assistant suite (coding, design, and product agents), building custom MCP servers with FastAPI and NestJS.
- Developed a multi-agent LLM pipeline to automate lead generation, pitch writing, and email outreach for the company's business development team.

Indiacharts Nov 2024 – Jan 2025
Backend Developer Intern

- Re-architected the real-time analytics backend to handle high-throughput OHLC data for 3,000+ stocks, enabling consistent sub-second indicator computation during peak market hours.
- Built scalable pipelines to compute 100+ technical indicators across multiple timeframes, balancing accuracy, latency, and syste m cost using distributed workers and optimized vectorized processing.

Projects

Conversly.ai   Live Link Jan 2024 – Present
Nextjs, nodejs, AWS (ec2, lambda), Prisma

- Conversly.ai is a **SaaS chatbot provider** that allows businesses to deploy chatbots with **custom knowledge bases** for highly tailored responses for their needs.
- Enables users to **embed agentic RAG chatbots** on their websites, Discord, and Slack channels with just a few lines of code, streamlining customer interactions.
- Utilizes a **scalable serverless architecture**, enabling fast chatbot responses and efficient web crawling for enhanced knowledge base creation.

Realtime Collaborative Workspace   Live Link Aug 2024 – Oct 2024
Next.js, Drizzle ORM, WebSockets, Redis, Kafka

- Created a **real-time collaborative** AI powered Document workspace enabling multiple users to work simultaneously, with live cursors, text selection, and **real-time chat** to boost team collaboration.
- Utilized WebSockets to broadcast changes in a workspace and chat in real-time to other collaborators, with Redis Pub/Sub for efficient message broadcasting.
- Designed an event-driven architecture using **Apache Kafka** to handle high-throughput, enabling reliable message delivery and scalable application performance across multiple instances.

Rate Limiting and Web Protection SaaS Platform   Live Link Nov 2024 – Dec 2024
Node.js, AWS Lambda, Redis, PostgreSQL, Prisma

- Built a **serverless backend** on AWS Lambda, offering less than 100 ms latency for rate limiting, bot protection, and SQL injection prevention.
- Developed an **npm middleware package** for seamless integration, capable of blocking confirmed threats locally in under 5 ms.
- Designed a **documentation website** to allow users to generate API keys and explore integration guidelines.

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.