

Saurabh Vishwakarma

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EXPERIENCE

Backend Engineer Intern

Jan 2024 – Dec 2024

Blue Mango Labs

Bhopal, India

- Architected and developed a high-performance REST API using FastAPI Framework that can process 100K+ daily requests for an astrology application.
- Used Domain-Driven Design patterns, resulting in 60% improved code maintainability and enabling us to separate each entity with a domain.
- Employed LiveKit SDK for real-time video streaming and voice calls, achieving 95% uptime and supporting 1000+ concurrent users with sub-second latency.
- Orchestrated AWS EC2 deployment with Nginx load balancing, resulting in 45% improved application performance and 99.95% system availability.
- Designed and implemented a scalable media management system using AWS S3, handling user-generated content with 99.99% durability.
- Integrated real-time messaging using MQTT Protocol, achieving message delivery latency under 100ms and supporting 10K+ concurrent connections.
- Utilized Langchain for an AI-powered response system, integrating Anthropic and OpenAI models.

PROJECTS

Sonnet | *React, FastAPI, SQLAlchemy, PostgreSQL, DaisyUI, Google Maps API*

Sept. 2024

- Created a high-scale logistics platform supporting 50M+ users with OAuth2 security, achieving 99.9% uptime and 200ms response times.
- Optimized location services with Google Maps API integration, reducing address errors by 75% and improving delivery accuracy by 40%.
- Built real-time notification system which can handle daily alerts with 100ms latency, boosting driver response rates by 45%.
- Implemented real-time tracking system processing 10M+ daily updates, achieving 99.9% accuracy and reducing delivery disputes by 60%.

Echo Harvest | *Python, Socket.io, PyGoObject, PostgreSQL, Redis*

Mar 2024

- Designed and built a real-time music activity monitoring system that tracks Playerctl daemon events, processing 1000+ events/minute with 99.9% accuracy.
- Applied bidirectional real-time data streaming using Socket.io, achieving 50ms latency.
- Produced a high-performance caching layer using Redis for track metadata, reducing database load by 70% and improving response times by 60%.

Academic Evaluation System | *Python, FastAPI, PostgreSQL, React, React Charts, Tailwind*

Jan. 2024

- Architected an academic analytics platform using React and FastAPI, can serve 500+ users with 99.9% uptime and 200ms response times.
- Enhanced it with grade visualization dashboards using React Charts, reducing data comprehension time by 40% for students and faculty.
- Engineered role-based authentication system with FastAPI and session based JWT, enabling secure access to 10K+ grade records.

EDUCATION

Rajiv Gandhi Proudyogiki Vishwavidyalaya (NIIST)

Bachelor of Technology in Computer Science Engineering

Bhopal, India

Aug 2021 - Present

RELEVANT COURSEWORK

Data Structures, Algorithms, Software Engineering, DBMS, Computer Networks, Operating Systems.

SKILLS

Languages: Python, Java, C, C++, JavaScript, Shell Scripting, Lua.

Frameworks: FastAPI, Flask, Django, React Js., Electron Js, Langchain, Astro.js Svelte.

Tools and OS: Linux, Git, SSH, Grafana, Nginx, Docker, Github Actions, Memcached, Kafka.

Cloud Platform: AWS(EC2, S3, RDS), Heroku, Render, Netlify, Azure.

Databases: MongoDB, Redis, PostgreSQL, MySQL.