# Saurabh Vishwakarma

Bhopal, Madhya Pradesh, India

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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 for an astrology application
- Used Domain-Driven Design patterns, resulting in improved code maintainability and enabling us to separate each entity with a domain
- Employed LiveKit SDK for real-time video streaming and voice calls, supporting 1000+ concurrent users
- Orchestrated AWS EC2 deployment with Nginx load balancing
- Designed and implemented a scalable media management system using AWS S3, handling user-generated content
- Integrated real-time messaging using MQTT Protocol
- Utilized Langchain for an AI-powered response system, integrating Anthropic and OpenAI models
- Connected Grafana and Prometheus for monitoring our application

#### **PROJECTS**

PinSphere | React, FastAPI, Celery, PostgreSQL, RabbitMQ, Memcached, OpenTelemetry

Dec 2024 - Feb 2025

- Developed a full-stack social media platform for sharing images, GIFs, audio, and video content
- Architected scalable media storage solution using AWS S3, implementing best practices for blob storage and optimizing for cost and performance
- Designed and implemented comprehensive security infrastructure using JWT authentication and OAuth2, enabling secure third-party login integration and protecting user data
- Enhanced user experience by integrating BlurHash technology, reducing perceived load times by displaying vibrant low-resolution previews while media loads
- Engineered modular monolith architecture to improve code maintainability
- Built automated media processing pipeline using Celery workers to handle image compression, thumbnail generation, and BlurHash creation, utilizing Python Pillow for optimized image manipulation
- Implemented comprehensive monitoring using Grafana and Prometheus integration with FastAPI, enabling real-time performance tracking and system health visualization

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%

## **EDUCATION**

## Rajiv Gandhi Proudyogiki Vishwavidyalaya (NIIST)

Bhopal, India

Bachelor of Technology in Computer Science Engineering

Aug 2021 - Expected Jun 2025

#### Relevant Coursework

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

## SKILLS

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

Frameworks: FastAPI, Django, React.js, Langchain, Astro.js, Svelte

Tools & OS: Linux, Git, SSH, Grafana, Nginx, Docker, GitHub Actions, Memcached, RabbitMQ, MQTT.

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

Databases: MongoDB, Redis, PostgreSQL, MySQL.