

# Suraj Bahuguna

Senior Software Engineer | Software Design, Development and Deployment | FullStack Development

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## EDUCATION

**Indian Institute of Technology, Delhi** — *Bachelor of Technology, Engineering Physics*

2016 - 2020

## SKILLS

### Tools -

1. Python, Flask, Django, Angular, MySQL, SQL Server, MQTT, RabbitMQ, Celery, Redis, Memcached, Nginx, Gunicorn, IIS, Kafka, Flink, Microservice Architecture, mongoDB, Node.JS, SQLAlchemy, Websockets, WebRTC, OAuth, Github Actions, CI/CD, multi-threading, multi-processing, async-await
2. LLMs, Pytorch, Tensorflow, Scikit-learn, numpy

### Cloud Platforms -

AWS (ECS, EC2, EBS, S3 Bucket, API Gateway, SQS)  
Azure (VM, Traffic Manager, RDS, Secrets, Azure Agents, DR)  
Google Cloud (Firebase, Vision API, OCR API)

Operating Systems - Linux, Windows

Cybersecurity Tools -Pentest, Uppguard, WIZ

## EXPERIENCE

**Wipro Linecraft AI, Pune** — *Senior Software Engineer*

OCT 2023 - JUNE 2024

- Achieved cost savings of \$5K monthly by devising a roadmap and implementing AWS migration, optimizing system performance.
- Processed over 1 million events daily with an event-driven IoT monitoring system in Apache Flink, enhancing data analysis capabilities.
- Created and optimized DAG batch data processing flows orchestrated using Luigi framework.
- Developed microservices from scratch using Python and Redis, performed load testing to ensure performance standards are met.
- Implemented a Singleton caching layer for Redis cluster interactions, boosting system performance.
- Increased database efficiency by 15% through connection pooling, partitioning, and indexing strategies.
- Created REST APIs in Flask optimized with Fast CGI for increased concurrent requests.
- Developed a health monitoring tool using Prometheus and Grafana to track system metrics such as RAM, CPU and disk space, and service uptimes, configured alerts to ensure proactive issue resolution and system reliability.
- Enhanced code quality and security by conducting multiple code reviews ensuring code standardization, optimization, and security.

## **Helloverify India, Noida — Senior Software Engineer**

AUG 2020 - OCT 2023

- Created highly optimized REST APIs focusing on scalability and security, capable of handling thousands of requests per second.
- Implemented a CI/CD pipeline with Azure DevOps, streamlining development and deployment workflows to ensure continuous integration and delivery, reducing deployment times and minimizing errors.
- Integrated Celery and Redis to manage asynchronous execution of resource-intensive tasks, enabling smoother performance and enhanced user experience.
- Optimized Django ORM queries to significantly reduce the number of database hits, improving overall application performance and reducing latency.
- Deployed Django web applications using Gunicorn and Nginx, efficiently managing concurrent connections and ensuring high availability and load balancing.
- Developed a Central Notifications Server to handle various forms of notifications, including emails, SMS, and WhatsApp messages, ensuring timely and reliable communication with users.
- Developed User Profile / Login and Payment wallet features in UI using Angular framework.

### **PROJECTS**

#### **Real-time Sensor Monitoring and Alerting Service — Python, Flink, Kafka**

Designed to detect high fluctuations in sensor readings and update to users in real-time.

Made use of Apache Flink and Kafka for real-time data stream ingestion and processing.

Introduced scalability (1 million data points in a day) by partitioning ingested data by sensor id and distributing the processing across several nodes

#### **System & Service Downtime Visibility Dashboard — Python, Prometheus, Grafana**

Developed an in-house solution for system and services health-check.

Custom made collectors for system metrics like CPU, RAM, HDD utilization as well as for backend services uptime monitoring.

All the metrics visible in real-time charts built on Grafana.

#### **Background Verification Platform — Python, Django, Angular, MySQL**

An end-to-end platform for client onboarding, configurations, data collection, processing and reports generation. Lead the design and development of the product

Built REST APIs in Django with necessary authentication and authorization security for modules like Authentication, Authorization, Data/Document Collection, AdminDashboard, TrackStatus and more.

Designed the processing module with custom client configuration options and a rule engine

Built and optimized report generation module - utilized celery workers to scale as per increasing business on product

#### **Reveu.AI (<https://reveu.ai>) — Python, Flask, React, SQLite**

An AI-led code review tool which offers seamless integration with Github and automatically posts review comments on your pull request as soon as a PR is raised

Created and deployed the entire web app from scratch while learning new technologies along the way

Created REST APIs in Flask with necessary authentication mechanisms. Created webhook endpoints for integration with Github to monitor changes to the PR

Designed a scalable version of the platform which can adhere to a growing number of users and hence API calls