Saurabh Verma

Senior Backend Engineer | Python • AWS • Scalable Systems | IIIT Allahabad

Backend-focused engineer with **10 years** of experience in scalable system design, product architecture, and cloud development.

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WORK EXPERIENCE

Senior Engineer
Cambium Networks

01/2023 - Present — *Bangalore, Karnataka*

Cambium Networks is a leading provider of wireless networking solutions, serving enterprises and ISPs globally.

Achievements/Tasks

- Developed and optimized backend services for cnMaestro, enhancing network monitoring and device management.
- Implemented asynchronous task processing with RabbitMQ & Celery, handling high-volume network events in real-time.
- Optimized database queries in MongoDB & PostgreSQL, improving response times and system efficiency.
- Improved system reliability with Redis caching, optimizing API response times for frequent queries.
- Applied object-oriented principles and design patterns (Factory, Singleton, Strategy, etc.) to develop scalable and maintainable backend services.
- Conducted in-depth code reviews and mentored junior developers on API design, testing, and cloud-native practices to ensure code quality and team growth.

Senior Software Developer
Helloverify India Private Limited

02/2020 - 01/2023 — *Noida, Uttar Pradesh*

HelloVerify is a background verification platform offering instant document verification, criminal checks, and identity validation.

Achievements/Tasks

- Designed and developed scalable backend services using Django & DRF, handling high-volume verification requests.
- Automated document verification workflows using Selenium, reducing manual intervention by 70% .
- Designed high-level and low-level architectures, ensuring scalability and maintainability.
- Integrated third-party cloud services such as Twilio, Razorpay, and Google Maps API to enable communication, payments, and location-based features.
- Led a team of developers and took complete ownership of backend modules — from requirement gathering to design, development, and deployment.

Consultant
CPA Global

08/2015 - 01/2020 — *Noida, Uttar Pradesh*

CPA Global is a technology-driven company providing enterprise solutions to streamline business operations.

Achievements/Tasks

- Automated data extraction and report generation using Selenium, reducing manual workload.
- Implemented role-based access control (RBAC) for secure user authentication and authorization.

SKILLS

- Language: Python
- Frameworks: Django, Django REST Framework (DRF), Flask, FastAPI, SQLAlchemy
- Core Concepts: Asynchronous Programming, Data Structures, Algorithms
- Databases: MySQL, PostgreSQL, MongoDB
- Cloud: AWS (S3, SQS, SNS, EC2, ECS, Lambda, API Gateway, CloudWatch, etc.)
- Messaging/Caching: Redis, RabbitMQ, Celery, Memcached
- Auth: OAuth2, JWT
- AI/LLM Tools: LLaMA, OpenAI (GPT), GitHub Copilot
- DevOps: Docker, Jenkins, GitHub, Bitbucket
- Tools & Platforms: Git, Jira, Sentry, Selenium, Google Maps API, Twilio, Razorpay
- Technical Leadership: Team Leadership, Mentoring, Code Reviews

EDUCATION

MTech - IT - Software Engineering
IIITA - 9.12 CGPA

2013 - 2015
Allahabad, Uttar Pradesh

BTech - Computer Science and Engineering
ACET - UPTU - 75.90 %

2008 - 2012
Aligarh, Uttar Pradesh

PROJECTS

cnMaestro – Cloud & On-Premises Network Management Platform (01/2023 - Present)

- *A cloud-based and on-premises software platform for secure, end-to-end wireless network management, offering full network visibility and zero-touch provisioning.*
- **Technology Stack**: Python, Flask, AWS Services (S3, SQS, SNS, EC2, ECS, Lambda, etc.), PostgreSQL, MongoDB, Redis, RabbitMQ, JWT, Docker, LLaMA
- Developed **multi-tenant architecture** to support multiple network operators with isolated environments.
- Implemented **real-time network monitoring APIs**, allowing administrators to track device performance and connectivity.
- Integrated **zero-touch provisioning**, enabling automated device onboarding and reducing manual setup time.
- Optimized **large-scale data processing** and storage in PostgreSQL and MongoDB, enabling efficient retrieval of historical network data.
- Implemented **event-driven communication** with RabbitMQ to enhance responsiveness for alerts and updates.
- Implemented RBAC to enforce secure, role-specific access to network data.
- Provisioned and managed cloud infrastructure using **AWS CDK**, enabling scalable and repeatable deployments with Infrastructure as Code.
- Fine-tuned Meta's **LLaMA model** on domain-specific datasets to enhance the accuracy of downstream NLP tasks such as summarization and question answering.

HelloV – WhatsApp-Based Instant Background Verification (08/2021 - 01/2023)

- A WhatsApp-integrated application enabling instant document verification (DL, Aadhaar, etc.) and criminal background checks.
- **Technology Stack**: Python, Django, DRF, AWS Services (S3, EC2, Lambda, etc.), Celery, Memcached, Selenium, MySQL, Docker.
- Integrated **WhatsApp chatbot** for seamless document submission and verification.
- Implemented **OCR-based document processing** to extract key details from Aadhaar, DL, and other IDs.
- Designed and optimized **MySQL database schema**, ensuring fast retrieval of verification records.
- Built **asynchronous task processing** using Celery & Redis, reducing response times for background verification checks.
- Automated **criminal record searches** using Selenium, eliminating manual intervention and improving efficiency.
- Led requirement gathering and system design to ensure scalability and robustness.

SocialTick – Instant Background Verification for Android & iOS (01/2021 - 08/2021)

- A mobile application enabling instant and accurate background verification, including document verification, criminal checks, liveliness checks, and face matching.
- **Technology Stack**: Python, Django, DRF, AWS Services (S3, SQS, SNS, EC2, ECS, Lambda, etc.), MySQL, Celery, Redis, JWT, Docker.
- Designed **real-time verification workflows**, ensuring instant processing of background checks.
- Implemented **face-matching and liveliness detection** for identity verification using AI-based algorithms.
- Integrated **secure document upload & OCR processing**, automating Aadhaar, DL, and passport verification.

Visa Screening – Web-Based Background Verification for Visa Applicants (02/2020 - 12/2020)

- Designed and developed a **Django & DRF-based** backend for managing document submission, verification workflows, and payment processing. Automated **document validation** using **Selenium**, reducing manual intervention. Implemented RBAC for secure applicant data handling and seamless API interaction with Angular frontend.

iWeb Task Manager – Employee Collaboration & Task Management System (06/2016 - 01/2020)

- Developed a **Django & DRF-based** backend to manage tasks, schedules, and team collaboration. Implemented **real-time notifications** for task updates and status tracking. Built **user access management** to enforce permissions and integrated APIs with **Angular frontend** for a smooth user experience.

AutoBot – Automated Data Extraction & Report Generation (10/2015 - 05/2016)

- Developed a **Flask-based** application to automate data extraction from multiple sources using **Selenium**. Implemented **dynamic data parsing** to transform unstructured data into structured reports. Designed **error handling and retry mechanisms** to improve extraction reliability and ensure seamless report generation.

CERTIFICATES

AWS Certified Solutions Architect - Associate 2020 (02/2021)

Python Gold Badge (05/2020)
HackerRank

Ethical Hacking Certification
Certified from Kyrion (in 2011) and Techdefence (in 2013) in Ethical Hacking.

ACHIEVEMENTS

Pursuit of Excellence Award (CPA Global Limited)
Got pursuit of excellence award for continuously delivering projects on time.

Qualified GATE exam
Qualified GATE exam from 2011 to 2018 with 98+ percentile.

Qualified UGC NET
Qualified UGC NET December-2014 and June-2015.

PUBLICATIONS

Journal Article

Evaluation of Privacy Preserving In-Network Aggregation for Different Routing Structures in WSNs

Author(s)

Saurabh Verma, Vishal Krishna Singha, Manish Kumar

2017

Proposed an efficient approach to detect node replication attacks in wireless sensor networks, enhancing security and reducing false positives.

LANGUAGES

English
Full Professional Proficiency

Hindi
Full Professional Proficiency