

AKASH SINGH

Software Engineer
Python & Backend Developer

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Professional Summary

Result driven Software Engineer with proven experience at *Nokia Solutions & Networks* and *Knoldus Software LLP*, specializing in Python development, backend engineering, automation and full-stack application development & deployment. Skilled in building RESTful APIs, containerizing applications using Docker, deploying workloads on Kubernetes, developing data-centric & scalable internal tools, automating complex workflows, parsing, large network datasets, and delivering end-to-end solutions using Python, Flask, Django, MySQL, Selenium and JavaScript. Delivered tools that reduced manual effort by 90-95%, streamlined network operations and improved team productivity.

Skills

Language: Python, PHP, JavaScript, PL/SQL, HTML, CSS

Frameworks & Libraries: Flask, Django, Pandas, Selenium, Bootstrap

Backend & API: REST API, Microservices (Flask based), JSON, XML

Databases: MySQL, SQLite

Tool & Technologies: Docker, Kubernetes, GitHub, GitHub Action, GitLab CI, SQL Alchemy, Linux, Postman, JSON, XML

Core Competencies: Backend Development, Data Centric Application Design, Process Automation, Data Parsing

Experience

Software Engineer at Nokia Solutions & Networks (Payroll & HR: STCS)

Gurgaon, Haryana, India

02/2024 to Current

Key Achievements:

- Designed and delivered 6+ production-grade tools used by Nokia engineering teams.
- Improved operational efficiency by 90-95% through automation of repetitive technical workflows.
- Built full-stack applications for booking, inventory, configuration audits and visualization.

Major Contributions:

1. Network Configuration Validation & Reporting System

- Developed a python-based validation engine performing 20+ compliance checks (ISIS, BFD, LLDP, RSVP, Interfaces).
- Developed Django dashboard to visualize validation results with search, filters, and excel reports.
- Reduced network audit time by 95% across large configuration datasets.
- Automated parsing of huge JSON router dumps into structured MySQL records.

2. Inventory Management System

- Build a full-stack inventory web app using Python, Flask, MySQL, JavaScript.
- Implemented bulk excel upload using python library openpyxl, improving asset tracking efficiency by 90%.
- Added live status tracking, search, pagination and user-friendly UI.

3. Lab Management System

- Developed a lab booking tool with real-time email alerts, admin panel and daily booking scheduler.
- Eliminated manual coordination and reduced booking conflicts.

4. IGP Topology Visualization Tool

- Processed multi-vendor LSDB outputs into a visual topology graph.
- Automated major modules of network path analysis for engineering teams.

5. Salesforce Automation

- Automated CRM workflow through selenium and python, reducing manual tasks significantly.

6. E-Learning Video Platform

- Built an admin-controlled training platform allowing role-based content assignment.

7. Internal Microservice Deployment & Observability Initiative:

- Designed and developed a lightweight Python Flask REST API to manage user data.
- Containerized the application using Docker and deployed it in a Kubernetes environment.
- Implement health and readiness probes, persistent volume storage and service exposure.
- Integrated Prometheus metrics (request count and latency) for foundational observability.
- Validated API behavior using Postman and ensured stability across pod restarts.

Tech Stack: Python, Django, Flask, Selenium, MySQL, PHP, HTML, CSS, JavaScript, Openpyxl, Pandas, REST API

Test Automation Engineer (Intern)

Knoldus Inc. | Part of NashTech - Noida, Uttar Pradesh, India

02/2023 to 11/2023

- Created automation testing scripts for web and android based applications for Go1Percent, Loblaws, Shoppers Drug Mart and Joe Fresh.
- Automated Android and iOS app test cases improving release reliability.
- Integrated scripts with CI/CD pipelines and ensured daily executions.
- Participated in analysis of production reports and supported QA teams in scaling test coverage.

Tech Stack: Python, Selenium, Appium, Jenkins, Junit, TestNG, API Testing, Postman, CI/CD, JavaScript, Java, GitHub, GitHub Actions

Education

Integrated B.C.A. + M.C.A: Computer Science and Engineering
Galgotias University - Greater Noida, India

06/2018 to 06/2023

- Final Grad: 82 %

Certifications & Accomplishments

- Hacktoberfest 2020: Completed and received swag in the open-source virtual festival by Digital Ocean.
- Oracle Academy: Certificate earned for proficiency in PL/SQL Database Programming Semester 2.
- AWS Cloud Practitioner Essentials: Completed with AWS training and certification.
- Python 101 for Data Science: Successfully completed with outstanding performance.