

# AKASH SINGH

Software Engineer  
Python & Backend Developer

Gurgaon, Haryana, India  
+91 8004045523  
[akashsingh4970@gmail.com](mailto:akashsingh4970@gmail.com)  
[www.linkedin.com/in/akash-singh-56a118146](http://www.linkedin.com/in/akash-singh-56a118146)  
<https://akash5523.github.io/akash-portfolio/#/>

## 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:

- 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.
- 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.
- 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.
- IGP Topology Visualization Tool**
  - Processed multi-vendor LSDB outputs into a visual topology graph.
  - Automated major modules of network path analysis for engineering teams.
- Salesforce Automation**
  - Automated CRM workflow through selenium and python, reducing manual tasks significantly.
- 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.
- Implemented 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

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**Integrated B.C.A. + M.C.A:** Computer Science and Engineering

06/2018 to 06/2023

**Galgotias University** - Greater Noida, India

- Final Grad: 82 %

## Certifications & Accomplishments

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- [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.