

# AKASH SINGH

Software Engineer  
Python & Backend Developer

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<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. Skilled in building 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:** Django, Flask, Pandas, Selenium, Bootstrap

**Databases:** MySQL

**Tool & Technologies:** GitHub, GitLab, RESTful API, SQL Alchemy, Linux, Postman, JSON, XML

**Core Competencies:** Backend Development, Process Automation, Scripting, Data Parsing, Workflow Integration

## 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. Monthly Account Review Platform – Internal Enterprise Web Application

- Deployed a Flask web application on Windows using IIS + FastCGI (wfastcgi), configuring application pools, site bindings, virtual environments, and secure internal IP access.
- Diagnosed and resolved IIS-level issues (HTTP 500.19 errors, permissions, and web.config routing) to achieve a stable, production-grade deployment.

## 8. AI & Developer Tooling Experience:

Hands-on experience using AI tools such as ChatGPT, Gemini, and Ollama for:

- Rapid prototyping and solution design.
- Code optimization and refactoring.
- Log analysis, data validation logic, and automation workflows.
- Integrated AI-assisted workflows into development and debugging processes to improve developer productivity and turnaround time.
- Experience experimenting with local LLM setups (Ollama) for private, offline-assisted development and internal tool use cases.

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

## 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, Loblaw's, 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.