ASTHA AWASTHI

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SUMMARY

Results-driven Software Engineer with 2+ years of experience in backend development, system optimization, and scalable distributed systems. Strong proficiency in **Python**, **Java**, **C**, and **C++** with hands-on expertise in **multithreading**, **system-level programming**, and cloud-native deployments (**AWS**, **Docker**, **Kubernetes**). Skilled in designing high-performance services, **automation frameworks**, and **microservice architectures**. Focused on building reliable, efficient, and production-ready solutions.

WORK EXPERIENCE

Software Development Engineer , Cisco   Aug 2023 - Present

- Built scalable **microservices/APIs** (40% lower latency) and delivered "Barge-in Supervisor" for real-time monitoring.
- Improved concurrency & fault tolerance using **Linux kernel-level** sync; created virtual multi-node labs.
- Automated **UI/regression** (Playwright, Robot), reducing QA time by 60%.
- Developed rollback-safe **CI/CD** pipelines enabling zero-downtime releases.

Software Development Engineer Intern , Cisco   Jan 2023 - June 2023

- Developed backend components for Cisco FMC, optimizing API workflows and configuration handling.
- Automated FMC use cases via **REST APIs**, **Postman**,**MongoDB**, **JavaScript** & **Python**; built scalable Postman collections.
- Improved backend logic through debugging, **data parsing** & policy management work.

Backend Python Developer Intern , Cuvette   Jul 2022 - Dec 2022

- Built backend modules using Django and REST APIs, improving query **performance** and **data-flow** efficiency.
- Contributed to responsive front-end components (**HTML**, **CSS**, **JavaScript**) to enhance end-user experience.
- Collaborated using **Git**, ensuring clean version control practices and smooth integration.

TECHNICAL SKILLS

Programming: Java, Python, C++, C, JavaScript, Golang
Frameworks/Tools: Django, Flask, React, REST APIs, Spring Boot, MVC
Database: MongoDB , PostgreSQL , MySQL
OS & Virtualization: Linux, Windows (Win32 APIs, threading, IPC), VMware, Hyper-V, KVM
Cloud & DevOps: AWS, Docker, Linux Containers, CI/CD (Jenkins, GitLab CI) , Kubernetes
Scripting & Testing: Bash, AWK, Sed, Robot Framework, Cypress, Playwright

KEY PROJECTS

Distributed Task Scheduler — Java, Spring Boot, Kafka/Redis

- Built a distributed task scheduling system capable of executing and coordinating background jobs across multiple worker nodes.
- Implemented microservices using **Spring Boot** with **REST APIs** for job creation, scheduling, and monitoring.
- Used Kafka/Redis as a message broker for event-driven **task distribution** and fault-tolerant job queuing.
- Added features like retry logic, task prioritization, and status tracking using **Redis/Kafka** streams.
- Ensured horizontal scalability and high availability through worker **auto-scaling** and **distributed locking**.

Real-Time Log Monitoring & Alerting System (Python + FastAPI + Redis)

- Built a **real-time** log monitoring and alerting system using Python, FastAPI, and Redis Streams.
- Implemented log ingestion pipeline with pattern-based anomaly detection and threshold-based alerts.
- Designed REST APIs for log queries, alert management, and system **health checks**.
- Achieved sub-second processing latency with **asynchronous workers** and Redis Pub/Sub.
- Deployed on Docker; added unit tests and **structured logging** for observability.

Intelligent Log Anomaly Detector (Python + ML)

- Built an **ML-based** log anomaly detection system using Python, **Scikit-learn**, and Elasticsearch.
- Processed large-scale application logs, extracted features, and **trained models** to flag unusual patterns.
- Integrated real-time alerting via Kafka + **Flask API,** reducing incident detection time by ~40%.

EDUCATION

Bachelorof Technology in Information Technology   **Aug 2019 - May 2023**
Gyan Ganga Institute of Technology and Sciences , RGPV
CGPA: 8.69

CERTIFICATIONS

- Google Cloud
- AWS AcademyCloud Foundations
- Devnet

- CCNA- Networking Essentials
- Python , Java, C++, C
- Cybersecurity Essentials