

SARTHAK NEGI

📞 +919084335914 ✉️ sarthaknegi908@gmail.com [🌐 LinkedIn](#) [📄 GitHub](#) [🔗 Portfolio](#)

PROFILE

Computer Science Engineering student with over two years of hands-on experience in backend development and distributed systems, including on-site experience at CERN. Proficient in Python with a strong focus on building reliable backend services, CI/CD pipelines, and containerised infrastructure.

EXPERIENCE

Backend Developer | go, mongodb, redis, gRPC, Kubernetes, Helm, GCP **Jan 2026 - Present**
GrexaAI (1M+ Active Users) *Mumbai, India · On-site*

- Implementing backend features and resolving production issues, improving **system stability**, while collaborating through **code reviews and technical discussions** to enhance overall system quality.
- Identified high-traffic APIs and implemented **Redis caching**, reducing database load and **latency by 70%**.
- Deployed microservices on **GCP Kubernetes (GKE)** and implemented **end-to-end observability**, reducing **MTTR by 40%** and improving system uptime and observability.

OpenLab Summer Student | python, bash scripting, S3, CI/CD, Openshift **June 2025 – Aug 2025**
CERN - European Organization for Nuclear Research *Meyrin, Switzerland · On-site*

- Worked with the **CERN IT-SD-TAB team** to research and integrate an **S3-compatible interface** into the CERN Tape Archive (CTA).
- Built **Bash** and **Python scripts** to automate the full setup — service installation, network configuration, **certificate exchange**, and **token generation**.
- Developed a **GitLab CI/CD pipeline** and **integration tests** to automatically validate the archival and retrieval system on every code change.

Software Engineering Intern | javascript, node.js, github-action **May 2024 - July 2024**
Keyloy - API Testing Tool *Bengaluru, India · remote*

- Led implementation of test case de-duplication, **reducing redundant tests by 70%** and improving code quality metrics.
- Built benchmarking workflows using GitHub Actions to automate performance validation in CI pipelines, **reducing deployment testing time by 25%**.
- Identified bottlenecks and optimized APIs/queries, improving **latency, throughput, and scalability**.

Student Developer | CI/CD, bash scripting, Gitlab, test-automation **Jan 2024 – April 2024**
KDE - KEcoLab: Energy Measurement Tool *Berlin, Germany · remote*

- Built automated tests to regularly verify system behavior, helping catch issues early and maintain reliable results, **increasing test coverage by 60%** and **reducing execution time by 30%**.

Linux Foundation Mentorship Intern | Go, Kubernetes **Sept 2023 – Dec 2023**
Cloud Native Computing Foundation - KubeEdge *San Francisco, California · remote*

- Built a feature enabling dynamic configuration of deployment settings (replicas, images, commands, env variables) based on node labels.
- **Optimized edge scheduling and traffic routing** by using node labels, network locality, and real-time performance signals to direct requests to the nearest healthy pods, **reducing latency by 40%**.

TECHNICAL SKILLS

- **Languages:** Python, C++, Go, HTML/CSS, Shell Scripting
- **Web Development:** Next.js, Node.js, FastAPI, Flask, Pydantic, SQLAlchemy, gRPC
- **Databases:** MySQL, PostgreSQL, MongoDB, Redis
- **Devops:** Docker, Kubernetes, CI/CD, Prometheus, Grafana, Helm, Terraform, Kafka, AWS, Openshift

PROJECTS

DevSecOps Deploy Netflix Clone | Jenkins, AWS, Docker, Kubernetes, Helm, ArgoCD GitHub

- Designed and automated an end-to-end **CI/CD** pipeline using **Jenkins** to build and deploy a containerized application on **AWS EC2**, integrating **Docker** for consistent environments and **SonarQube** for static code analysis and quality enforcement.
- Strengthened deployment security and observability by implementing **Trivy-based** container vulnerability scanning and **Prometheus–Grafana** monitoring, while enabling **GitOps-based** deployments using ArgoCD.

Multi-Tier Web Application on AWS | S3, RDS, CDN, IAM, ElastiCache, Amazon MQ Link

- Built and deployed a multi-tier application on **AWS (EC2, RDS, Elastic Beanstalk, S3, CloudFront, ElastiCache)**, ensuring **high availability** and system reliability.
- Automated infrastructure setup and service integrations (**IAM, security groups, Amazon MQ, caching**), improving deployment efficiency and reducing manual effort.
- Implemented **caching, messaging, and CDN layers** to enhance **performance**, reduce latency, and improve overall system stability.

TravelFY | Python, FastAPI, Pydantic, Next.js, Docker GitHub

- Developed an **AI-powered travel planner** that generates personalized itineraries, with a **FastAPI** backend using **Pydantic** models for request validation, persistent storage, and seamless integration between AI logic and the user interface.

NutriFY | Python, FastAPI, LangGraph, OpenAI GPT-4 GitHub

- Built an **AI-powered nutrition assistant** with a **FastAPI** backend, using **Pydantic** models for request validation, **SQLAlchemy** for persistent meal and profile storage, and **asyncio** to coordinate multi-agent workflows for real-time meal tracking and personalized nutrient guidance.

CERTIFICATIONS

- **AWS Cloud Practitioner Essentials**
 - Gained foundational knowledge of core AWS services (EC2, S3, EBS, RDS, DynamoDB), networking, security (IAM, MFA), monitoring tools, global infrastructure, migration strategies, and cost optimization.
- **Introduction to Continuous Delivery and GitOps using Argo CD**
 - Gained **hands-on experience with GitOps-based continuous delivery** using **Argo CD and Helm**, applying pull-based Kubernetes deployment models, auto-sync, and health monitoring.
- **Certified Kubernetes Administrator (CKA) (In Progress)**
 - Gaining hands-on experience with Kubernetes, working on cluster setup, upgrades, backups, and deployments and troubleshooting, networking, storage, and security components in production-like environments.

OPEN SOURCE WORK & ACHIEVEMENTS

- **Member and Open Source Contributions** - Kubernetes and Kubernetes-Sigs
 - As an org member I actively contribute to new features, bug fixes and write unit tests
 - Served as a **Kubernetes Release Shadow v1.34**, collaborated with Release Leads and sub-teams.
- **Speaker: Open Source Summit Japan 2024**
 - Presented my LFX project work, where I explored improving Kubernetes workload placement using node labels and designed a feedback-driven traffic routing approach to reduce latency and make deployments more flexible.
- **References** [↗](#)

EDUCATION

Jaypee Institute of Information Technology, Noida, India **2022 - 2026**
Bachelor of Technology in Computer Science and Engineering

- **Relevant Coursework:** Introduction to C & C++, Introduction to Python, Database Management Systems, Operating Systems, Object-Oriented Programming, Computer Networking, Data Structures & Algorithms, Intro to Unix System, Fog and Edge Computing