

VAIBHAV UPRETI

vaibhavupreti.me

☎ +91 (958)-210-2828 ✉ vaibhav.upreti16@gmail.com 🌐 linkedin.com/in/vaibhav-upreti/ 📄 github.com/VaibhavUpreti

Education

Maharaja Agrasen Institute Of Technology

Bachelor of Technology in Computer Science with specialization in AI and ML; CGPA: 8.789

Nov 2021 - June 2025

New Delhi, India

Amity International School

Intermediate CBSE Board; Percentage: 90.2

Nov 2019 - May 2021

Delhi, India

Technical Skills

Languages: C++, Python, Go, Ruby, Bash, SQL, JavaScript, TypeScript

Tools & Platforms: NodeJS, Docker, CI/CD, Terraform, Prometheus, Kubernetes, Helm, AWS, GCP, Heroku, Git

Frameworks: Rails, Flask, Svelte, NextJS, Apache Spark, Apache Kafka

Databases: PostgreSQL, Elasticsearch, MySQL, Redis, MongoDB, Cassandra

Experience

CircuitVerse

Core Team Member, GSoC Mentor

Oct 2022 - Present

remote

- Actively maintaining and regularly reviewing **infrastructure** for CircuitVerse.
- Authored **Helm Charts** and maintained documentation, automation scripts, Terraform configuration, and blog posts for CircuitVerse.org.

PanScience Innovations

Software Engineer Intern

Feb 2024 - July 2024

New Delhi, India

- Built **Proteus**, an API monitoring platform, including designing event-driven microservices in Go and Kafka.
- Led the development of **Sankalpam.ai**, providing remote access to holy places, delivery of blessed offerings, and expert counseling.

Google Summer of Code'23 @CircuitVerse.org

Student Developer

May 2023 - Sep 2023

remote

- Successfully made the application **12-factor compatible**, significantly improving its efficiency and scalability.
- Efficiently migrated nearly **1 million attachments** of more than **300k users** (e.g., avatars, Circuit images from the server) from deprecated tools to AWS S3.
- Implemented Opentelemetry **distributed tracing** via gRPC and HTTP protocols, enhancing observability, and exported telemetry data to 2 backends - Jaeger and New Relic.
- Introduced **Monit tool for server monitoring** and automatic repairs, ensuring 100% system stability and reduced critical failures.
- Created a **zero downtime deployment pipeline** using GitHub Actions and kamal.
- Dropped visitor tracking by adopting **HyperLogLog** for efficient project view count.

Projects

Proteus | Go, TypeScript, Svelte, Elasticsearch, Postgres, Kafka, Helm

- Developed a **comprehensive API monitoring platform** with capabilities for both internal and third-party APIs.
- Crafted a **pinger service** for monitoring, dynamic API payload scanning, and notifications and alerts.
- Scaled platform to handle **50+ API endpoints daily** across multiple global regions, processing over **100,000 requests per day**.

MetaSync | Python, Kafka, Apache Stream, Cassandra, PostgreSQL, MySQL, AWS

- Engineered a **near-real-time metadata synchronization**, achieving a 95% data ingestion latency reduction for improved reliability and observability.
- Optimized data lake with 4+ metadata store integrations, resulting in a 30% reduction in access times, enhancing security and support.

HandWriting Recognition WebApp | Machine Learning, Flask, AWS, Helm, Kubernetes, arm64, CI/CD

- Created a Flask web app, hosted on AWS EC2 and **integrated CNN and RNNs** with the YOLO-based HTR model.
- Trained the HTR model on **34,000 images**, with 6.5k unique words, achieving **91.93% accuracy**.
- Crafted a GitHub Actions workflow **to build and push a Docker image to a registry**, along with **Helm charts**.

Achievements/Volunteering Experience

- Google Summer of Code'24 Mentor and Core-team Member:** CircuitVerse.org
- Mentor at **FOSS HACK'2023**
- Curate and maintain a **private homelab** powered by Mac Mini M2 as a server.
- GSSoC'22 Ranked(137)** among 2000+ contributors, **FOSS HACK'2023** mentor.