

# VAIBHAV UPRETI

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## Education

### Maharaja Agrasen Institute Of Technology

Bachelor of Technology in Computer Science with specialization in AI and ML; CGPA: 9.052

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++, JavaScript, Ruby, Python, C, Prolog, Bash

**Tools:** Docker, Kubernetes, Build Tools(rake), CI/CD, Terraform, MRSK, Prometheus, Opentelemetry, Helm

**Frameworks:** NodeJS, Rails, Flask, Gatsby, Hugo

**Platforms:** Git, AWS, Heroku, GCP

**Databases:** PostgreSQL, MySQL, Redis, MongoDB, Cloud Databases

## Experience

### Google Summer of Code'23 @CircuitVerse.org

May 2023 - Present

Student Developer

remote

- Successfully made the application 12-factor compatible, significantly improving its efficiency and scalability.
- Efficiently migrated nearly 1 million user attachments (e.g., avatars, Circuit images from the server) from a deprecated tool 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 MRSK.
- Dropped visitor tracking by adopting HyperLogLog for efficient project view count.

### CircuitVerse

Oct 2022 - May 2023

Student Developer

remote

- Executed critical production migrations, replaced two outdated tools.
- Developed bash scripts for seamless project setup that works on more than 5 OS distributions.
- Introduced a customizable notification service and added 2 new notification events.
- Ensured 100% code coverage through RSpec unit tests while delivering detailed documentation and blog posts.

### GirlScript Summer of Code

Feb 2022 - May 2022

Contributor

remote

- Ranked 137 among 2000+ contributors, actively contributed to web projects, specializing in JavaScript, React, and NodeJS, while assisting peers.

## Projects

### Innate | Rails, JavaScript, PostgreSQL, Redis, Circle CI, REST API

- Built a multi-tenant SaaS English Learning Platform with a 3-tier architecture, utilizing Docker volumes for production deployment.
- Optimised API calls by 80% by removing redundant SQL queries, following skinny controller fat model approach.

### HandWriting Recognition WebApp | Machine Learning, Flask, AWS

- 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.

### npx vaibhav-up | JavaScript, NodeJS, JSON

- An NPM package that serves as a resume in CLI with 500+ downloads. Deployed the package and automated the build process using CI/CD.

## Extracurricular/Awards

- Mentored participants at FOSS HACK'23 for CircuitVerse.org.
- Curate and maintain a private homelab powered by Mac Mini M2 as a server.
- Active Member of CircuitVerse, GDSC MAIT and Intelgenics MAIT
- Earned 15 skill Badges in Google Cloud Practitioner program.