

# SARTHAK SHAH

Machine Learning & Security Engineer

✉ [shahsarthakw@gmail.com](mailto:shahsarthakw@gmail.com) • [coldboot.org](https://coldboot.org)  
in [linkedin.com/in/sarthak-shah-sos](https://linkedin.com/in/sarthak-shah-sos) • [github.com/matchcase](https://github.com/matchcase)

## EXPERIENCE

**Mercari, Inc.** May 2024 - July 2024  
Security Engineering Intern Tokyo, Japan

**KEY SKILLS:** Threat Detection, Incident Response, Terraform

- Worked as a part of the Threat Detection & Response team.
- Wrote and deployed programs for sensing network scans and analyzing firewall logs.
- Wrote log routers and BigQuery views for the same and deployed them to the SOAR through Google Cloud PubSub using Terraform.

**Google Summer of Code** May 2023 - September 2023  
Intern with the GNU Project Remote

**KEY SKILLS:** Operating System Development, Linux, Functional Programming

- One of the 2.2% of applications selected for the Google Summer of Code program.
- Worked on adding an interface for compile-time options to the Guix package manager.
- [Project Completion Report](#) and [Source Code](#).

**GeneNetwork** November 2023 - January 2025  
Software Developer Remote

**KEY SKILLS:** WebAssembly, NumPy, Data Visualization

- Worked on building a Genome Browser for [GeneNetwork](#), a project under University of Tennessee's Health Sciences department.

**High Performance Computing Lab, BITS Pilani** January 2023 - May 2024  
TA, System Administration Onsite

**KEY SKILLS:** System Administration, Networking, Incident Management, Ansible

- Worked as one of the Assistant System Administrators for the university's High Performance Computing cluster
- Worked on access management, incident management, change management and capacity management of the cluster.

## EDUCATION & CERTIFICATIONS

**University of Oxford** January 2025 - July 2025  
Recognized Student Oxford, United Kingdom

Studying and conducting research as a Recognized Student under the Department of Computer Science, University of Oxford in the fields of Cybersecurity and Deep Learning.

**CompTIA Security+** October 2024  
[Link to verified credentials](#)

**Birla Institute of Technology and Science, Pilani** 2021 - 2025  
MSc. Mathematics (Integrated, Hons.)  
Minor in Computing and Intelligence

## SKILLS

---

**Networking:** Linux, TCP/IP, System Administration, Google Cloud Platform, Terraform, Azure, Automation and Scripting

**Cybersecurity:** Threat Detection, Incident Response, Cryptography, SOAR, Change Management, Access Management, OSINT, DevSecOps, Fuzzing

**Machine Learning:** PyTorch, Scikit-Learn, NumPy, Pandas, LangChain, Apache Spark

**Programming:** Python, Go, Ansible, Scheme, Clojure, Bash, C/C++, CUDA, Fortran, WebAssembly

**Communication:** English, Japanese, Team Leadership

## HIGHLIGHTED PROJECTS

---

**Plyppy** A Boot Animation Creator for Linux

**SeerGPT** An LLM-powered Tarot Reader

**TileEx** A Tiling Pattern Extractor written in Go

**Parameterized Packages for GNU Guix** GSoC '23 Project adding Compile-Time Options to GNU Guix, a Transactional Package Manager

**GWAS Plotter** GWAS Plotter that can do Manhattan Plots and QTL Plots

**Yui** A feature-rich Discord bot with LLM integration, written in Clojure

## EXTRACURRICULARS

---

**Society for Open Software**  
President

**June 2022 - Present**

- Organized and spoke at six workshops that covered git, dual-booting, networking and shell scripting.
- Organized and hosted two CTF competitions.

**Journal Club**

**2022**

Editor-in-chief

Served as the Editor-in-chief for the annual Freshman magazine, *Whisper in the Woods*.

## ACHIEVEMENTS

---

**National Supercomputing Mission GPU Hackathon**

**2022**

Participant

IIT Bombay

A Supercomputing GPU Hackathon organized by Nvidia.

**Winner, IIT Goa's Cepheus CTF**

**2023**

**Runner up, IIT Hyderabad's Cipher - Cracking Contest "Enigma"**

**2023**

**Rank 3, NCFE-NFLAT**

**2017-2018**

**Gold Medalist, Queen's Commonwealth Essay Writing Competition**

**2015**

## LINKS

---

Github: <https://github.com/matchcase>

Linkedin: <https://linkedin.com/in/sarthak-shah-sos>

Blog: <https://blog.coldboot.org>