

Atreya Bain

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Overview

Passionate about building secure, scalable solutions with a keen eye for detail and usability. Software Engineer with experience in secure distributed systems, automation, and compilers.

Education

- University College London**, M.S. — Software Systems Engineering 2024 – Present
- Relevant modules: Requirements Engineering and Software Architecture, Computer Security, Malware
- R. V. College of Engineering**, B.E. — Computer Science & Engineering 2018 – 2022
- GPA: 9.07/10

Experience

- Postgraduate Teaching Assistant**, University College London – London, UK Jan 2025 – Present
- Grading for the Compilers module.
 - Provided feedback to students on coursework.
- Software Engineer**, Cisco Systems – Bengaluru, IN Aug 2022 – Sep 2024
- Developed application security features for Cisco IOT Control Center (IoTCC), such as Single Sign On support using SAML and user security policies.
 - Spearheaded the extraction and centralisation of application secrets used by IoTCC applications in 20+ lab and production environments into centralised Vault, reducing emergency dot releases by ~40%.
 - Built POCs and contributed to APIs and monitoring for an OAuth 2.1 microservice deployed on K8S clusters.
 - Optimised and automated the synchronisation of application secrets and SSL Certificates using Jenkins pipelines, reducing release deployment times by ~25%.
 - Deployed Spring Cloud Config Servers on 8+ on-prem and newly created cloud (AWS) environments.
 - Led design and implementation of a CAPTCHA solution across shared environments to mitigate bot activity in multi-environment deployments.
- Software Engineering Intern**, Cisco Systems – Bengaluru, IN Feb 2022 – Jul 2022
- Developed a solution in collaboration with the team for managing and externalising SSL certificates for Cisco IoTCC, reducing creation of emergency releases by ~40%.
 - Implemented git hooks to collect ownership metadata of SSL Certificates to trace team ownership ~75% faster.
- Software Engineering Intern**, Lexis-Nexis Risk Solutions – Bengaluru, IN (Remote) May 2021 – Aug 2021
- Extended HSQL by adding BigQuery-style procedures and strongly-typed variables.
 - Added syntax supporting 15+ graphing methods, user-created machine learning models and external ECL code.
 - Awarded the Community Choice Award in HPCC Systems Poster Competition 2021.
- Backend Development Intern**, Revagram – Bengaluru, IN Sep 2019 – Nov 2019
- Developed and tested RESTful APIs for learning materials management.

Projects

- IEEE RVCE Student Chapter Website** - github.com/IEEE-RVCE Jul 2020 – Dec 2022
- Led the Back-end team for developing the IEEE RVCE Student chapter website, receiving 2 awards in the IEEE Student Branch Website Contest in 2021 - Winner at the Global Level and Runner up at R10 level.
 - Led the web team in 2021, championing CI/CD and design reviews to reduce iteration times by ~ 20%.
 - Technologies: Express.js, PostgreSQL, Docker, React, Github Actions, Github Pages, Oracle Cloud.
- HSQL - HPCC Structured Query Language** - github.com/hpcc-systems/hsq Jan 2020 – Jul 2020
- Designed HSQL – a language enabling a familiar SQL-like interface for data analysis in HPCC Systems.
 - Created a compiler with an ANTLR-based frontend, emitting ECL code and a VSCode extension for supporting development in HPCC Systems clusters using HSQL.

Skills

Programming Languages: Java, Typescript, JavaScript, Python, Rust, C++, C
Frameworks: Spring Boot, Spring Cloud, React, Next.JS, Sencha EXT.js, HTML5
Databases: PostgreSQL, Oracle DB, MySQL, Redis, MongoDB
Technologies: Docker, Kubernetes, Hashicorp Vault, Grafana, Prometheus, Oracle Cloud, AWS, git, ANTLR, Kestrel