

Atreya Bain

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Overview

Software Engineer with experience in secure large-scale distributed systems, automation, and programming languages. Passionate about building scalable and secure solutions with a keen eye for detail and usability.

Education

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

Experience

- Postgraduate Teaching Assistant**, University College London – London, UK Jan 2025 - Present
- Valuation of coursework and final examination for module Compilers.
- Software Engineer**, Cisco Systems India Pvt. Ltd. – Bangalore, IN Aug 2022 - Sep 2024
- Collaborated with team on application security for Cisco IOT Control Center (IoTCC), such Single Sign On support and user security policies.
 - Collaborated with multiple teams on extraction and centralization of application secrets used by IoTCC applications in 20+ lab and production environments.
 - Managed Jenkins pipelines to automate synchronization of application secrets and SSL Certificates across IoTCC deployment environments, decreasing release deployment times by ~25%.
 - Designed and implemented a captcha solution for sharded systems to mitigate unwanted bot activity.
 - Formulated POCs and worked on implementation for OAuth 2.0 authorization server (K8S) microservice.
- Software Engineering Intern**, Cisco Systems India Pvt. Ltd. – Bangalore, IN Feb 2022 - Jul 2022
- Developed a solution in collaboration with team for managing and externalizing SSL certificates for Cisco IoTCC, reducing creation of emergency releases by ~40%.
 - Implemented git hooks to automatically collect impact ownership metadata of SSL Certificates to allow for quicker action in case of certificate expiry.
- Software Engineering Intern**, Lexis-Nexis Risk Solutions – Atlanta, US (Remote) May 2021 - Aug 2021
- Extended HSQL to introduce Big-Query like procedures and strongly-typed variables.
 - Added HSQL syntax to support graphing methods and machine learning models outside the standard library.
 - Awarded the Community Choice Award in HPCC Systems Poster Competition 2021.
- Backend Development Intern**, Revagram – Bengaluru, IN Sep 2019 - Nov 2019
- Developed RESTful APIs using MongoDB and Express.JS.

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 development team from 2021, championing CI/CD and design reviews to cut down development times by ~20%.
 - Technology Used: 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
- Built HSQL - enabling a familiar SQL-like interface for data analysis in HPCC Systems.
 - Created a compiler and VSCode extension for supporting development in HPCC Systems clusters using HSQL.
 - Tools Used: ANTLR, HPCC Systems, Webpack, Mocha.

Skills

Programming Languages: Java, Typescript/JavaScript, Python, C++ , C, Rust, PHP
Frameworks: Spring Boot, React, Next.JS, HTML5
Databases: MySQL, PostgreSQL, Oracle DB, Redis, MongoDB
Technologies: Docker, Kubernetes, OCI, AWS, git, ANTLR