

Atreya Bain

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Overview

Software Engineer with experience in secure large-scale systems, automation, and formal languages. Highly passionate about building innovative, scalable and secure software 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

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.
- Formulated and implemented a captcha solution for sharded systems to mitigate unwanted bot activity.
- Created Jenkins pipelines to manage and automate synchronization of application secrets and SSL Certificates across IoTCC deployment environments, decreasing release deployment times by ~25%.
- Collaborated with multiple teams on extraction and centralization of application secrets used by IoTCC applications in 20+ lab and production environments.

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/hsql Jan 2020 - Jul 2020

- Built HSQL - a BigQuery-inspired language for performing data analysis on HPCC Systems, aimed at data scientists new to the platform.
- Created a compiler and VSCode extension for supporting development in HPCC Systems clusters using HSQL.
- Tools Used: ANTLR, HPCC Systems, Webpack, Mocha.

Projectile Tracking using Filters Oct 2020 - Dec 2020

- Implemented and evaluated projectile tracking algorithms based on sensor inputs in Java and C++.
- Spearheaded designing interactive UIs to plot sensor input and compare projectile tracking accuracy.

Skills

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