Atreya Bain

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Education

University College London, M.S. - Software Systems Engineering   Sep 2024 ~ Present
- Relevant coursework: Requirements Engineering and Software Architecture, Computer Security

R. V. College of Engineering, B.Tech - Computer Science & Engineering   Aug 2018 - Jul 2022
- GPA: 9.07/10

Experience

Software Engineer, Cisco Systems India Pvt. Ltd. – Bangalore, IN   Aug 2022 - Sep 2024
- Worked with team on various aspects of application security for Cisco IOT Control Center (IoTCC), such Single Sign On support and user security policies.
- Designed a picture verification solution for login to reduce abuse of automation by users.
- Created Jenkins pipelines to manage and automate synchronization of the secrets and SSL Certificates across various IoTCC deployment environments, decreasing release deployment times by ~25%.
- Collaborated with multiple teams on extraction and centralization of application secrets used in IoTCC applications and their centralization in over 20+ lab and production environments.

Software Engineering Intern, Cisco Systems India Pvt. Ltd. – Bangalore, IN   Feb - Jul, 2022
- Worked with team in developing a solution for managing and externalizing SSL certificates for Cisco IoTCC, reducing creation of emergency releases by ~40%.
- Implemented githooks 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 - 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 - Nov, 2019
- Designed course APIs using MongoDB and Express.JS.

Projects

IEEE RVCE Student Chapter Website - github.com/IEEE-RVCE   Jul 2020 - Dec 2022
- Developed a website with team for the IEEE RVCE Student chapter with CI/CD practices.
- Led the web development team in the second year, reducing iteration times for design.
- Website was a winner in IEEE Global Student Branch Website Contest 2021 and Second Runner Up in the IEEE R10 level Student Branch Website Contest 2021.
- Technology Used: ExpressJS, PostgreSQL, Docker, React, Github Actions, Github Pages, Oracle Cloud.

HSQL - HPCC Structured Query Language - github.com/hpcc-systems/hsql   Jan - Jul, 2020
- Designed a BigQuery inspired language for querying and data analysis using HPCC Systems (Big Data Processing platform) for data scientists new to the platform.
- Created a compiler and IDE extension that converts HSQL to ECL for execution in HPCC Systems clusters.
- Tools Used: ANTLR, HPCC Systems, MochaJS, Webpack.

Projectile Tracking using Filters   Oct - Dec 2020
- Implemented Kalman and Particle Filters in Java and C++ to track moving projectiles from sensor inputs.
- Worked with team to design UI to plot sensor input and compare predicted trajectories.
- Compared performance of Kalman, IMM and Particle Filter implementations with various motion models and determined usable parameters and models for projectile tracking.

Skills

Programming Languages: Java, Typescript, JavaScript, Python, C, PHP
Frameworks: Spring Boot, Spring Cloud, React, Next.JS, HTML5
Databases: MySQL, PostgreSQL, Redis, MongoDB
Technologies: Docker, OCI, AWS, git, ANTLR, Kubernetes, FluxCD
General: Web Development, Distributed Systems, Compiler Design, Data Structures