

# Sanath Bhimsen

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## EDUCATION

**M.S in Computer Science - Boston University, Boston, MA**

**Expected Dec 2023**

**Relevant Coursework:** Graduate Algorithms, Object Oriented Design Principles, Streaming And Event Driven Systems, Android Mobile App Development(Kotlin).

**B.Tech in Computer Science - PES University** (Graduated with Distinction)

**Aug 2015 - Aug 2019**

**Specialization:** Data Science

## SKILLS

- **Programming Languages/Technologies:** C/C++, Python, R, Java, HTML/CSS, Javascript, Kotlin
- **Technologies:** Firebase, AngularJS, React, RESTful APIs, Flask, D3.js
- **Tools/CI-CD/Databases:** Linux, Git, Jira, Jenkins, Github Actions, Docker, MySQL, MongoDB

## WORK EXPERIENCE

**FIRMWARE ENGINEERING INTERN, INFINERA**

**Jun 2023 - Aug 2023**

- Developed a **Metric Collection Framework** at the Firmware level for the Infinera GX controller.
- Generated **real-time data visualizations** to analyze memory and CPU utilizations.

**Technical Skills:** Python, Seaborn

**SOFTWARE ENGINEER, SOPHOS TECHNOLOGIES**

**Jun 2019 - Jun 2022**

- Played a pivotal role in building the front-end of the Amazon VPC port to the Sophos XG firewall, contributing to a deeper understanding of the domain.
- Initiated and **executed bug fixes across the entire system**, demonstrating a proactive approach to enhance overall stability and functionality.
- Revamped the VPN UI on the XG Firewall, leading to its release in version 19. This redesign streamlined the user interface, **improving the overall user experience**.
- Participated in comprehensive code reviews, ensuring the integration of **clean** and **optimized** code.
- Led optimization efforts on critical UI components, **achieving a 50% reduction in latency and page load times, thereby improving system performance**.

**Technical Skills:** Python, Java, C/C++, JavaScript, HTML, CSS, and React

## PROJECTS

**Addressing transient workload spikes with Cloud Bursting in Apache Flink**

**Feb 2023 - May 2023**

*Boston University*

- Developed a solution for handling abrupt **workload spikes** in **Apache Flink** by integrating **Cloud Bursting**, an innovative offloading technique.
- Replaced the traditional back-pressure mechanism with Cloud Bursting to transfer surplus workload to a scalable cloud provider (e.g: **AWS**), ensuring **optimal system performance** during workload surges.
- Demonstrated an enhancement to the Apache Flink framework by enabling it to seamlessly accommodate sudden **workload fluctuations** and reducing back pressure in the pipeline to zero in all experimental tests conducted.

**Technical Skills:** Java, Apache Flink, Cloud Bursting, AWS, Distributed Stream Processing

**ATM/Banking Management System**

**Nov 2022 - Dec 2022**

*Boston University*

- Implemented a modular system architecture following an **object-oriented design approach**, emphasizing **code reusability**. Utilized helper functions to further enhance reusability and simplify development.
- Maintained a well-structured design methodology throughout the project. This approach simplified maintenance and updates, making the system more robust.
- Led the design and implementation of key components in the **data access object (DAO) layer**, responsible for **database interaction** and data mapping to the object design.
- Created a **user-friendly interface** for efficient account management, streamlined transaction processing, and instant daily report access, utilizing the **Model-View-Controller (MVC) design pattern** throughout the application's development.

**Technical Skills:** Java, Swing Java GUI, MySQL, Object-Oriented Design, Design Patterns (MVC)