Sanath Bhimsen

Boston, MA |+ 1 (857) 381-8952 | [Linkedin](#) | sanathbhimsen26@gmail.com | [Github](#) | [Portfolio](#)

SKILLS

- **Programming Languages**: Python, Java, JavaScript, TypeScript, HTML/CSS, Kotlin, C/C++, R
- **Database Technologies**: MySQL, SQLite3, PostgreSQL, MongoDB
- **Frameworks & Libraries**: AngularJS, React, Django (including REST Framework), Node.js, Express, Flask, d3.js
- **Cloud & Data Technologies**: AWS (EC2, DynamoDB, Lambda, S3, VPC), Firebase, Apache Flink, Apache Kafka
- **DevOps & Automation**: Git, Jenkins, GitHub Actions, Docker, Kubernetes, Jira, Postman

WORK EXPERIENCE

RESEARCH ASSISTANT, BOSTON UNIVERSITY   BOSTON, MASSACHUSETTS   **March 2024 - Present**

- I collaborate with Professor Neha Gondal at Boston University Faculty of Computing & Data Sciences to streamline and refine large PERM datasets, enhancing our analysis of U.S. hiring and compensation trends, with a particular emphasis on how educational backgrounds influence salaries.
- Implemented fuzzy matching to standardize company names and utilized the OpenAI API for mapping constituent colleges to main universities, thereby enhancing data integrity. Further enriched the dataset with university rankings and company revenues, **boosting research data accuracy by over 60%**.

DATA ENGINEERING INTERN, INFINERA   SAN JOSE, CALIFORNIA   **Jun 2023 - Aug 2023**

- Developed a Metric Collection Framework in Python at the Firmware level of the Infinera GX, which was designed to periodically gather insights about the processes and resources utilization as part of the soak testing pipeline.
- Monitored memory and CPU usage using system commands (top and free), adding real-time graphs through the gathered data to an existing dashboard to track tests and logs, **resulting in a 20% reduction in CPU utilization**. Enhanced targeted optimizations and resolved performance bottlenecks through team collaboration.

SOFTWARE ENGINEER, SOPHOS TECHNOLOGIES   BENGALURU, INDIA   **Jun 2019 - Jun 2022**

- Developed a feature using React, Node.js, and Java to establish site-to-site IPsec VPN connections from Sophos XG firewall to AWS VPC, automating the import of connections to AWS resources (e.g.,EC2, RDS, S3 etc) deployed within the VPC.
- Developed and optimized RESTful APIs in Node.js for handling VPN configuration submissions, and integrated them with a Java backend using Spring JDBC for SQL processing and database updates
- Conducted performance testing with Postman, **improving API response times by 30%** and improving overall page performance.
- Fixed various bugs, including performance bottlenecks, security vulnerabilities, and functionality errors, to enhance system stability, and **managed 15+ customer escalations**.
- Redesigned the VPN UI on the XG Firewall for the version 19 release, significantly refining visual appeal and usability.
- **Achieved a 50% reduction in latency and page load times** by spearheading optimizations in React-based UI components, streamlining code execution and resource loading.

DATA SCIENCE INTERN, PERFIOS   BENGALURU, INDIA   **Jan 2019 - May 2019**

- Implemented interactive d3.js visualizations for Perfios's Market Intelligence project, enhancing **research efficiency by 50%** and significantly aiding strategic decisions.

PROJECTS

Emotion Based Music Recommender [Project link](#)   **Nov 2023 - Dec 2023**

Engineered an emotion-based music recommender web application using Python's Flask framework for the backend and React for the frontend. Utilized the BERT model for nuanced emotion detection from user input, providing personalized music recommendations across a comprehensive emotional spectrum to enhance emotion-specific music discovery.

Boston Air Quality Analysis   **Oct 2023 - Dec 2023**

Collaborated with the City of Boston to analyze public transportation's impact on air quality and health using Python. Employed the AirNow API to gather data from sensors across 28 zip codes and applied statistical modeling to inform policy for environmental and public health enhancements.

Addressing transient workload spikes with Cloud Bursting in Apache Flink [Project link](#)   **Feb 2023 - May 2023**

Implemented Cloud Bursting in Apache Flink to dynamically handle sudden workload spikes during data ingestion by offloading excess tasks to the AWS Lambda service, eliminating pipeline back-pressure and showcased the scalability and efficiency of Cloud Bursting in maintaining system functionality under peak load conditions.

ATM/Banking Management System [Project link](#)   **Nov 2022 - Dec 2022**

Developed a banking app in Java with a user interface built using Swing GUI, a Java toolkit. Implemented a modular, object-oriented architecture with MVC design to improve code reusability and maintainability

EDUCATION

M.S in Computer Science - Boston University, Boston, MA   **Jan 2024**

Coursework: Graduate Algorithms, Object Oriented Design Principles, Streaming And Event Driven Systems, Android Mobile App Development(Kotlin), Conversational AI, Computational Tools for Data Science, Natural Language Processing.

B.Tech in Computer Science - PES University, Bangalore (Specialization: Data Science)   **Aug 2015 - Aug 2019**