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 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 to connect Amazon VPC to the Sophos XG firewall by importing cloud connection information for AWS resources, working with product managers, UX designers, and senior software engineers.
- Developed new and optimized existing RESTful APIs to handle VPN configuration submissions, ensuring efficient SQL 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   **Nov 2023 - Dec 2023**

Engineered a Flask-based, emotion-based music recommender web application with a React frontend, utilizing 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 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   **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   **Nov 2022 - Dec 2022**

Developed a banking app with a modular, object-oriented architecture and MVC design, enhancing code reusability and user experience through an intuitive interface for account management and transactions.

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**