Saisindhu Palasamudram

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EDUCATION

Stony Brook University, New York, USA **Aug 2022 - May 2024**
Master of Science in Computer Science ***GPA:* 3.6/4.0**

GITAM UNIVERSITY **Aug 2017 - July 2021**
Bachelor of Technology in Computer Science and Engineering ***GPA:* 4.0/4.0**

Coursework: Computer Networks, ML, Data Visualization, DBMS, Big Data Analytics, AI, Algorithms, Distributed Systems

SKILLS

Programming:	Python, Java, Go , C/C++, HTML/CSS, ReactJS, JavaScript, Typescript
Databases :	MySQL, MongoDB, Cassandra, Redis, PostgreSQL
Cloud Tech:	Azure, AWS, Docker, Jenkins, Kubernetes, Databricks, GCP - BigQuery
Backend:	NodeJS, Spring Boot, Kafka, REST APIs, Flask, Spark, Grafana, JUnit, Selenium
Others:	UNIX/Linux, JIRA, GIT, Agile, Apache Hadoop, jQuery, Bootstrap, Maven, Postman
Other Experiences:	Teaching Assistant - Stony Brook University, Web Developer - GITAM University

EXPERIENCE

Stony Brook University **Stony Brook, NY**

Graduate Student Assistant - Biomedical Data Analytics Lab – React, D3.js, Node.js, Spark, TensorFlow **Jan 2023 - present**

- Developed a web-based platform for biomedical data visualization using **React**, **D3.js,** and **Node.js**, significantly simplifying data analysis for researchers.
- Built a scalable data pipeline with **Spark, Kafka**, and **Cassandra,** reducing processing latency by 30% and enabling quicker insights from large datasets in real-time scenarios.
- Created a predictive machine learning model using **Python** and **TensorFlow**, achieving 88% accuracy, crucial for forecasting in biomedical research based on historical data.

Cognizant **Bangalore, India**

Software Engineer - Python, Java, Spring boot, Cassandra, Kafka, Redis, Linux, Azure **Jun 2021 – Jul 2022**

- Optimized Honeywell's logistics system handling 100,000+ daily transactions with a **Java** and **SQL** back-end, enhanced by **Docker** and **Kubernetes** for improved scalability and system resilience.
- Increased reliability of Honeywell's payment processing by enhancing code coverage to 95% with **JUnit** and **Mockito**, integrated into a **Selenium**-driven **CI/CD** pipeline, minimizing risks in financial transactions.
- Developed a data-driven marketing tool using **Java** and **Kafka Streams**, coupled with a **Cassandra REST API,** which improved decision-making efficiency by 50% and reduced response times by 70%.
- Enhanced user experience for Honeywell's ticketing system by implementing **Redis** caching, which reduced high-traffic query times by 30%, ensuring smooth operation during peak periods.
- Automated network operations with **Python** and **CRON jobs**, increasing infrastructure reliability and reducing maintenance overhead by 20%, leading to cost-effective system management.
- Shortened feature deployment cycles on Honeywell's e-commerce platform by 40% through a **Jenkins CI/CD pipeline**, accelerating product innovation and enhancing customer satisfaction.
- Refined incident management in cloud storage with **Grafana** and **Prometheus**, adjusting alerts for quicker anomaly detection and response in a **Kubernetes** environment, significantly reducing downtime.

Cognizant **Bangalore, India**

Software Engineer Internship - NodeJS, React, Redux, Typescript, PostgreSQL **Jan 2021 – May 2021**

- Enhanced enterprise CRM system operations by integrating **RESTful APIs** with Axios in **React**, improving data exchange and workflow efficiency.
- Improved stability and user experience on a public-facing booking platform by developing unit and integration tests in **React**, reducing customer complaints.
- Boosted query performance by 10% in a financial analytics application using a redesigned **PostgreSQL** database, facilitating faster strategic decision-making.

PROJECTS

- **Generative AI Interactive Platform, Self-Directed**: Developing a real-time text generation platform with ReactJS, Python, and Flask. Includes contextual query refinement and automated, personalized email notifications.
- **Reliable Distributed Hash Table using Raft Protocol**: Developed a Distributed Hash Table with Raft for high availability and fault tolerance. Benchmarked to confirm scalability and performance; made configurable for diverse state machines**.**
- **DNSSEC Resolver and Wireshark Trace Analyser:** Designed a DNSSEC resolver using dnspython for multiple queries and created a tool to analyze network traffic, focusing on RTT, throughput, and congestion metrics.
- **Automated Disease Protocol App:** Developed a healthcare tool that converts flow charts into React code, improving access to medical information in underserved areas. Features include REST API, Node.js, and MongoDB for enhanced data handling and user experience.