Bhanu Prakash Thipparthi

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EDUCATION

New York University **December 2024**
Masters in Computer Engineering New York City
- **Coursework:** Big Data, Machine Learning, Deep Learning, Operating Systems, Internet Protocols, Data Structures and Algorithms

Siddhartha University **September 2020**
Bachelors of Technology in Electronics and Communications Engineering India

PROFESSIONAL EXPERIENCE

New York University **May 2023 – Present**
Full Stack Software Engineer Manhattan, NY
- Developed "**SupportHub**," AWS-based **IT ticketing platform** with React.js, Express.js, and MongoDB, integrating an **LLM**-driven chatbot.
- Migrated codebase from **Snowflake** to **GitLab** using **AWS Lambda** with Python runtime resulting in a **30%** reduction in deployment time
- Extracted **HR** data from Workday via **REST API** calls, triggered by AWS Lambda, stored in an **S3** bucket, and loaded into Snowflake HR tables, resulting in a **40%** increase in data processing efficiency and a **25%** reduction in data retrieval times
- Configured **AppDynamics** dashboards and alerts to provide real time application health and performance resulting in a **40%** decrease in mean time to detection **(MTTD)** and enabling a **faster incident resolution.**
- Revamped **UI/UX** of key landing pages using **A/B testing**, boosting click-through rates by **20%** .

Tata Consultancy Services **October 2020 – February 2023**
Associate Software Engineer, Product Development Team Hyderabad, India
- Led the design and development of enterprise level **microservices** application of **Automobile Group**, using the technologies of **ReactJS, Node.js, Java, SQL** for real-time vehicle performance monitoring system over 100k+ concurrent users.
- Optimized SQL queries and indexing for a **PostgreSQL** database, decreasing query response times by **50%** and improving system throughput.
- Refactored a legacy **C++** codebase, eliminating duplicative logic to reduce code volume by **20%** and improve maintainability.
- Implemented continuous integration and continuous deployment **(CI/CD)** pipelines using Jenkins and Docker, cutting average release cycle times by 40%.
- Directed a collaborative effort with **UX designers**, **product managers**, and **architects** to launch a key feature on a website with over **10,000 users**, completed the project three weeks ahead of schedule that generated an additional **$100K** in revenue per quarter
- Implemented test-driven development **(TDD)** and automated testing using **Jest**, raising test coverage from **50%** to **90%** and catching **80%** of bugs before production.

SKILLS

- **Programming Skills**: C,Python, JavaScript, TypeScript, Linux/Unix, Java,,C++, HTML/CSS
- **Frameworks:** SQLite **,** PyTorch, Numpy, Pandas, AWS(EC2, S3, Lambda, SQS), React, Tensor-Flow, Django, Node.js, Express.js, Angular, Spring Boot, MongoDB, Git, Jenkins, Rest API, Spark, Snowflake, Kubernetes, Docker, Kafka, WebSockets, Spark, Jest

PROJECTS

DISTRIBUTED FILE SYSTEM
- Implemented a simple distributed file system, used the Two Phase Commit(it is a specialized type of consensus protocol) protocol to carry out distributed atomic transactions. The system also used Maekawa's algorithm for mutual exclusion.

MUTUAL EXCLUSION USING A PRIORITY-BASED APPROACH WITH LOGICAL CLOCKS
- Implemented the Ricart-Agrawala algorithm for distributed mutual exclusion, with the optimization proposed by Roucairol and Carvalho. The Ricart-Agarwala algorithm is an extension and optimization of Lamport's Distributed Mutual Exclusion Algorithm**.**

CRYPTOCURRENCY ANALYSIS AND PREDICTION
- Leveraged Binance **APIs, Kafka, SQL, and MongoDB** to create a real-time and historical cryptocurrency data processing system, achieved **84%** accuracy in price forecasting with ARIMA, and launched an Angular website for user analytics

TRANSFER LEARNING OF FOOD CLASSIFICATION
- Enhanced a food classification model's accuracy to **85.2%** using Transfer Learning with **MobileNetV2**, and deployed on CloudLab with Kubernetes, results in a 30% reduction in resource(CPU and Load Balancer) usage

LEADERSHIP EXPERIENCE

- Served as the intermediary between the graduate student body and the **Google Developer Student Club** (**GDSC**), addressing concerns and gathering feedback, which led to a **20%** increase in club membership and a **25%** improvement in the club's overall rating.
- Developed and aligned coursework with academic projects and hands-on learning at **NYU's Center for K12 STEM Education**, promoting diversity and inclusivity by encouraging underrepresented groups, resulting in a **30**% increase in student engagement