

Mamatha Yarramaneni

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EDUCATION

University at Buffalo, The State University of New York

Master's in Computer Science and Engineering, Software Engineering (GPA: 3.9)

Buffalo, NY

Graduation Date: December 2023

SASTRA University

Bachelor of Technology in Computer Science and Engineering, (GPA: 8.8/10.0)

Chennai, India

Graduation Date: June 2021

WORK EXPERIENCE

Ultimate Tool & Safety

Software Engineer Intern (ReactJS, ExpressJS, Typescript, REST API) - Equiplink Software

Arlington, TX

July 2023 – Present

- **Full Stack Development** : Designed, developed, and deployed a scalable end-to-end software application which included full-stack engineering, database administration, **load balancing**, and web hosting. This was achieved using **React**, **Redux**, **NodeJS**, **PostgreSQL**, **Nginx**, and hosted on **AWS** infrastructure.
- **Authorization** : Revamped role-based access control using **JSON Web Tokens (JWT)** middleware to enhance security, which resulted in a 43% reduction in unauthorized access incidents.
- **Database Logs** : Incorporated robust PostgreSQL database **log capture** using **Type ORM** audit and storage mechanisms, to maintain records of system activity, thereby significantly reducing 80% of customer effort in tracking their business operations.
- **Automated System Alerts** : Developed a computerized email **alerting system** using Twilio email API to notify customers of overdue tests. This resulted in a 40% enhancement in user engagement.

University at Buffalo

Graduate Teaching Assistant

Buffalo, NY

Spring 2023 and Fall 2023

- **CSE 560 - Data Models and Query Languages**: Provided one-on-one support to 8 project teams facing database design and integration challenges, inducing a 10% improvement in overall course progress.
- **CSE 574 - Introduction to Machine Learning**: Offered guidance on Python-based machine learning concepts, diligently evaluated course projects, and achieved an 18% enhancement in the grades of over 250 students.

Navis

Associate Software Engineer (Spring Boot, Typescript) — Navis BWM(Berth Window Management)

Chennai, India

February 2021 – August 2022

- **Full-Stack Development** : Engaged in integrating Angular and Spring Boot with high-quality code using **Functional Programming** and **Test-Driven Development** methods, triggering 30% faster project delivery and code defect reduction.
- **Automation script** : Streamlined data updates by 95% through the development of an **automation script** using **Typescript** and **NodeJS**, bringing about a 25% boost in team productivity.
- **CI/CD Pipeline** : Optimized CI/CD pipeline with Jenkins triggers for **Git-Kubernetes** auto deployment of automation script, reducing failures by 30% and cutting down deployment time from hours to minutes.
- **Microservices and integration** : Integrated Navis BWM with Navis N4 with **REST** and **SOAP API** calls by developing Groovy scripts, ensuring uninterrupted data flow of 10,000+ API calls between microservices.
- **Test Driven Development** : Boosted team productivity by 70% through PostgreSQL **stored procedures** and **Jest unit tests**, which led to a 60% drop in critical defects and a decrease in code review iterations.

TECHNICAL SKILLS

- **Programming**: C++, Java, Typescript, Python, Shell
- **Development**: React.js, Angular, Spring Boot, Node.js, Express.js, HTML, CSS
- **Other**: Git, RDBMS, PostgreSQL, MySQL, MongoDB, Docker, DevOps, Google Cloud Platform, AWS, SaaS, IaaS

ACADEMIC PROJECT EXPERIENCE

- **Health Hub Pro** [[Github](#)] Managed and led a team of 3 to present a database system for a hospital. Architected a full-stack application implementing **Indexing**, **Triggers**, and **Stored procedures** that boosted database operational performance by 75% using **PERN stack**.
- **Hashtag Stream Analyzer** [[GitHub](#)] Analyzed and built a pipeline to generate the top 10 trending hashtags on data collected from Twitter streaming API. Implemented a **Hadoop MapReduce** Java script on the **Dataproc** service of **Google Cloud Platform** that accelerated environment setup by 46%.
- **Clickbait Spoiling** [[GitHub](#)] Collaborated and constructed a model to classify and summarize spoilers for clickbait posts. Information Retrieval, **Neural Networks**, and **Transformers** models like **BERT** were used to achieve an accuracy of 73.8% for classification and an F1 score of 82% for generation models.

AWARDS & INVOLVEMENT

- **Leetcode**: Solved 270+ **Data structures and Algorithms** problems.
- University at Buffalo: **Speaker** for the workshop on Version Control with Git for over 70 students.
- Navis: **RAMP Emerging Leader Award** for the category Better Together.
- SASTRA: **Dean's Merit Scholarship Awardee**.