

Mahitha Pasupuleti

I am a problem solver. Give me a challenge, and I will go above and beyond to find the best solution.

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WORK EXPERIENCE

System Engineer | *Tata Consultancy Services* | Project- Bank of America Jan 2023 - Jan 2024

- **Architected microservice** using Java, Spring Boot, Spring Security, and JWT, a crucial security layer for all API calls. It efficiently handles **100K+ daily API requests**, reducing security risks by 30%.
- Led a 10-member security team to identify and **patch 12+ critical vulnerabilities** (including Log4j, CSRF, and broken access control), reducing breach risks by **40%**.
- **Eliminated** duplicate strings and objects using garbage collection logs and **refactored 1.8K** lines of code, reducing website **memory consumption by 99%**.
- **Reduced** Kafka event synchronization **delay from 5 hours to 2 hours** for a method that moves data from multiple sources to AWS S3 via Apache Kafka, achieving a 35% improvement in system responsiveness.

Assistant Systems Engineer | *Tata Consultancy Services* | Project- Bank of America Jan 2021 - Jan 2023

- Optimized API performance, reducing response times from **500ms to 200ms**, improving system efficiency, and ensuring **smoother customer interactions for 50K+ daily users**.
- Developed RESTful APIs for MongoDB data aggregation, **improving query performance by 40%** and enabling seamless handling of 1M+ records in batch processes.
- Achieved a **20% boost in React state management efficiency** by integrating Redux and the Context API, further optimized by leveraging react-query caching for enhanced data handling.
- Improved React UI performance by implementing lazy-loaded modules, **resulting in a 35% reduction in page load time**.

Teaching Associate | California State University, Fullerton Jun 2024 - Current

- Delivered in-depth lessons on Web Frontend Engineering (HTML, CSS, JavaScript, React) to 45 students, emphasizing best practices in responsive design, component-based architecture, and state management.

PERSONAL PROJECTS

Personalized Health Tracker | [Code](#) | *Azure Databricks, Data Lake, PySpark, Kafka, Python, Java, SQL* Mar 2024

- Designed a real-time heart rate tracking system using Fitbit devices, implementing a lakehouse architecture with Azure Databricks for efficient data storage and processing.
- Enhanced data quality across bronze, silver, and gold layers using Medallion Architecture and integrated Kafka for real-time BPM data ingestion and streaming.

Nihira | [Code](#) | *Node.js, Express.js, React.js, MongoDB, WebSockets, Kafka, Redis, Docker, AWS* Jan 2025

- Building a real-time chat application using WebSockets, Kafka for event-driven architecture, and Redis for caching.
- Focusing on scalable system design, cloud deployment on AWS, and ensuring high availability and fault tolerance.

Underwater Plastic Detection | [Code](#) | *YOLOv8, Python, OpenCV, Deep Learning, TensorFlow, Cuda* Jan 2025

- A real-time video processing system using YOLOv8 custom model that detects and classifies underwater plastic pollution.

EDUCATION

California State University, Fullerton | **Master's in Computer Science** Jan 2024 - Dec 2025

Jawaharlal Nehru Technological University Hyderabad | **Bachelor of Computer Science Engineering** Aug 2016 - Sep 2020

SKILLS

Programming:	Java, Javascript(ES6+), Python, HTML5, CSS3, TypeScript, SpringBoot, React.js, Node.js, Express.js
Database Technologies:	Oracle SQL, MySQL, MongoDB(CLI/Atlas), PostgreSQL, SQLite, Azure Cosmos DB,
Fullstack Web Dev:	Spring Security, Hibernate, JPA, REST APIs, JWT, WebSockets, Tailwind CSS, Django
Tools and Libraries:	Kafka, Redis, RabbitMQ, Postman, Mulesoft, Maven, VSCode, IntelliJ, Eclipse, Git
Cloud & DevOps:	AWS, Azure, Jenkins, Jira, Ansible, Splunk, Docker, Kubernetes, GitLab

LEADERSHIP AND ACHIEVEMENTS

- **Co-founder**, Coding Forum, JNTUH: Undertook projects and organized workshops and weekly learning sessions for almost 200 students on the **Latest Technology Stacks(MERN, Java Springboot)**.
- **Published** a research paper in [IIAEMA](#) (Vol. 12, Issue 4), contributing to advancements in the field.