SAI SRIRAM GUNDEPALLI

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EDUCATION

Eastern Illinois University   Charleston, IL
M.S., Computer Technology   May 2024

Jawaharlal Nehru Technological University   Kakinada, India
B.S., Electronics and Communication   July 2021

RESEARCH EXPERIENCE

Jawaharlal Nehru Technological University   Kakinada, India
Final year project, Electronics and Communication   March 2021 – July 2021

- Developed an Internet of Things (IoT)–based *Automated Toll Tax Collection System* integrating RFID sensors, Arduino microcontroller, and a cloud-hosted Firebase database to automate toll transactions and vehicle verification.
- Programmed Arduino modules in C/C++ for RFID tag authentication and real-time data transmission to the Firebase backend, enabling seamless, low-latency toll charge deductions.
- Implemented a mobile application that synchronized with the cloud database, allowing users to monitor trip logs, receive instant payment notifications, and recharge toll wallets digitally.

PRESENTATIONS

- Presented a seminar on *Automatic License Number Plate Recognition Using Template Matching* to the Department of Electronics and Communication Engineering, demonstrating application of digital image processing and MATLAB GUI for automated vehicle identification.
- Explained implementation of template matching, edge detection, and morphological operations in MATLAB to achieve ~80% recognition accuracy for real-time vehicle license plates.
- Showcased end-to-end system design including preprocessing, segmentation, and optical character recognition (OCR), highlighting its potential for traffic automation and security monitoring.

PROFESSIONAL EXPERIENCE

Carvintech   Atlanta, GA
Software Engineer   (March 2025 – Present)

- Designed and deployed Java 21 event-driven microservices with Kafka to process millions of customers, device, and subscription events daily, boosting throughput and cutting latency by 35% across distributed systems.

- Integrated GraphQL and REST APIs for high-volume client applications, reducing payload over-fetching by 40% and ensuring interoperability through OpenAPI/Swagger compliance.
- Engineered Postgres and Cassandra schemas with optimized indexing, partitioning, and caching strategies, achieving sub-100 ms query times for 500K+ assets and analytics queries.

SuperINTRO   San Francisco, CA
Software Engineer   (December 2024 – March 2025)
- Contributed to early-stage architecture of an AI-persona social platform, building event-driven Java microservices with Kafka to support real-time message delivery.
- Optimized data-streaming pipelines to achieve sub-second latency for over 10K concurrent users, improving platform responsiveness.
- Developed GraphQL APIs for structured persona data, reducing redundant API calls by 40% and enabling cross-platform client integration.

Tata Consultancy Services (TCS)   Chennai, India
Software Engineer   (August 2021 – November 2022)
- Developed enterprise Java (Spring Boot, Hibernate) APIs for asynchronous financial workflows, cutting transaction delays by 20% across 200+ daily requests.
- Designed and optimized Oracle PL/SQL schemas and queries, enhancing retrieval speeds by 30% for large-scale data stores (500K+ records).
- Integrated REST and GraphQL APIs across departments, reducing reporting latency by 25% for 500+ assets and workflows.

REFERENCES

Dr. David W Melton
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