Siva Prakash K

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EDUCATION

Master of Computer Applications   09/2022 - 06/2024
College of Engineering, Guindy   CGPA 7.98

Bachelor of Computer Applications   06/2019 - 06/2022
Apollo Arts & Science College, Chennai   CGPA 8.48

EXPERIENCE

Software Engineer   Chennai
Atsuya Technologies   06/2024 - present

- Developed 20+ RESTful APIs using FastAPI and Spring Boot, integrating JWT authentication, AWS RDS, and TimescaleDB for secure, scalable retail and IoT systems.
- Automated image processing and file generation with C++, shell scripts, and AWS S3/SQS, reducing manual workload by over 80% and enhancing efficiency.
- Reverse-engineered PRN files into PNG images for printer compatibility on custom Linux boards and fine-tuned ChatGPT API to convert POS bill text to structured JSON.
- Built an IoT-based gas consumption reporting system with Spring Boot and SQS.

PROJECTS

RetailGPT
Backend Development

- Reverse-engineered PRN files into PNG images for ESC/POS, ZPL, Star/PRT, and BPL CUPS on custom Linux boards for seamless printer integration.
- Developed 20+ RESTful APIs using **FastAPI**, with JWT authentication, ORM models, and AWS RDS for secure, scalable backend systems.
- Automated image uploads to S3 with SQS-based event notifications, enhancing backend efficiency and reliability.
- Enhanced OCR accuracy by improving image preprocessing in C++ with custom filters and noise reduction techniques.
- Fine-tuned **ChatGPT API** to build an AI assistant that maps POS bill text to structured JSON, streamlining data workflows.
- Reduced manual workload by over 80% through automation of image processing and file generation using custom shell scripts.

Gas Consumption Report
Backend Development

- Developed an IoT-based consumption reporting system for HP Gas using **Spring Boot**, enabling real-time monitoring and analytics for gas usage patterns.
- Used **SQS** and **TimescaleDB** for scalable and reliable message streaming, facilitating the integration of IoT devices with backend systems.
- Secured the application with **Spring Security** and **JWT**, ensuring robust authentication and authorization mechanisms.
- Designed a user-friendly web interface using **React** and Bootstrap enabling customers to visualize consumption trends and reports.

SKILLS

- **Programming:** Python, Java, & C++
- **Frameworks:** Spring Boot & FastAPI
- **Databases:** PostgreSQL, Cassandra, Redis, TimescaleDB, Neo4J & MongoDB
- **Data Science:** Numpy, Pandas, Seaborn, ScikitLearn, OpenCV, Keras & Tensorflow
- **Cloud:** Microsoft Azure & Google Cloud
- **Tools:** Visual Studio Code, Linux, Docker, Kubernetes & Git

CERTIFICATES

- **Microsoft Fabric Professional** - Azure
- **Machine Learning Specialization** - Coursera
- **Machine Learning Specialisation on Google Cloud** - Coursera