Sasi Preetham Chopparapu

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Location: Atlanta, GA

EDUCATION

Kennesaw State University — Marietta, GA
Master of Science in Information Technology — *expected 2025*

SRM University — Chennai, India
Bachelor of Technology in Electronics and Communication Engineering — *2019 - 2023*

EXPERIENCE

Kennesaw State University — Marietta, GA
Graduate Teaching Assistant—CSE 1321 and CSE 1322. — *Jan 2025 - Present*

- Led lab sessions covering advanced programming topics, including object-oriented programming (OOP), inheritance, polymorphism, dynamic data structures, recursion, file I/O operations, and exception handling across Python and Java.
- Assessed student code for algorithmic efficiency, memory usage, and adherence to software engineering best practices, ensuring code quality.
- Collaborated with faculty to refine lab content and exams, integrating practical programming tasks aligned with industry standards in areas like GUIs, event-driven programming, and data manipulation.
- Collaborated with faculty and fellow GTAs to refine course materials and integrate agile methodologies and test-driven development into the curriculum.

Criativo Technologies — Remote
MLOps and DevOps Intern — *May 2024 - Sep 2024*

- Migrated inferencing from Ollama to Vllm, significantly increasing speed by 3.5x utilizing GPU.
- Optimized video ingestion from YouTube to Vimeo using Kafka with Docker, increasing speed by 5x.
- Managed deployment with Docker, Nginx. Oversaw 300+ users & 25000+ monthly hits.
- Built a container registry with Kubernetes and set up AWS-EKS using Terraform, with monitoring tools like Grafana, Prometheus, and Loki.
- Designed and deployed scalable solutions for both on-premises and cloud environments, utilizing Kubernetes manifests for container orchestration and Dockerfiles for containerization and maintained 0 CVE Images.

Aditya University — Remote
Software Developer Intern — *Dec 2022 - Aug 2023*

- Collaborated with a 10-member academic team to design and implement a content aggregator and expense tracker system as part of a university project, achieving a 71% code churn improvement.
- Developed the API, back-end, and front-end for a single-page application within the first 30+ days of joining the team.
- Optimized MySQL database queries to support high transaction volumes during peak enrollment periods, improving data retrieval speeds by 30%, containerized services with Docker, implemented automated CI/CD pipelines with Jenkins, reducing deployment times by 50%.
- Actively participated in sprint planning and Agile ceremonies recommending performance optimizations and practices.

PROJECTS

- **Document Processing and Querying Platform**: The Document Processing and Querying Platform automates secure PDF extraction, processing, and querying using an Airflow-managed ETL pipeline. It uses FastAPI with JWT-based authentication to ensure secure access to private encrypted GCP buckets for document storage. The platform extracts text, images, and tables from PDFs using open-source tools and PDF.co, storing the processed data in MongoDB for querying. Users can interact through a Streamlit front-end to summarize and query documents using OpenAI LLM, with Docker and Terraform managing scalable deployment.
- **Crisis Connect**: A full-stack MERN application built with React, Node.js, Express.js, MongoDB, and TypeScript, designed to connect people in emergencies with essential resources. It features incident reporting, a safe house locator, and an AI-powered chatbot for disaster management queries, improving crisis response and support.
- **Automatic System for Driver Drowsiness Detection using Deep Learning**: Developed a driver drowsiness detection system using deep learning and OpenCV. Trained a TensorFlow/Keras CNN achieving 96 % accuracy with 2 % false positives. Processed 30 FPS video with alert latencies under 0.2 sec and integrated real-time streaming, boosting driver intervention by 50%.

SKILLS

- **Technical Skills**: Python, Java, Javascript, Typescript, Julia, R, C++, GO, SQL, React, Redux Next, Node, Express
- **Libraries**: Clerk, Appwrite, Cloudinary, PyTorch, Keras, Langchain, Postman, OpenCV, FastAPI
- **Technologies**: Prisma, Drizzle, Docker, Kafka, Airflow, MongoDB, Postgres, Kubernetes, AWS, GCP, Azure, Terraform
- **Skills**: Machine Learning, SpringBoot, IDE, Web Development, Web Services, Software engineering, DevOps, Microservices.

CERTIFICATIONS AND PUBLICATIONS

- Chopparapu, S. P., et al. "Automatic System for Driver Drowsiness Detection Using Deep Learning." Proceedings of the 2023 International Conference for Advancement in Technology (ICONAT), Goa, India, Jan 24-26, 2023
- Microsoft Certified: Azure (AZ-900)