Ankith Boggaram

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EDUCATION

Master of Science, Computer Science (CGPA: 3.95) | University of Utah — Aug. 2023 - Present

- Specialization in Data Science, *Utah Center for Data Science*
- Specialization in Deep Learning for AI and Robotics, *Kahlert School of Computing*

Bachelor of Technology, Computer Science and Engineering | PES University — Aug. 2019 - May 2023

EXPERIENCE

Magna International — Jun. 2024 - Nov. 2024
Data Scientist Intern | *Troy, Michigan, United States*

- Developed a dockerized Triton Inference Server microservice along with a microservice for transmitting and storing large volumes of data on cloud storage, improving throughput of the data pipeline by **over 45%**
- Worked in an agile team and contributed in the creation and refactoring of multiple other microservices for a computer vision application, leading to an improvement in overall performance by **over 84%**
- Containerized all microservices and deployed them on a Nvidia Jetson device for use in a production environment, ensuring efficient and scalable operations on both edge devices and cloud platforms

Continental Autonomous Mobility — Jan. 2023 - Jul. 2023
Research & Development Intern | *Bangalore, Karnataka, India*

- Engaged in **applied research** as a core developer and implemented a **novel algorithm** for detection and avoidance of power cables in autonomous navigation drones, designed for Continental's long-range 77GHz radars
- Synthesized structured datasets from raw point-cloud data and subsequently created a deployable ROS2 node on the Nvidia Jetson Nano for **real-time** emulation of the same, significantly improving run-time

Centre for Heterogenous and Intelligent Processing Systems, PES University — May 2021 - Dec. 2021
Research Assistant | *Bangalore, Karnataka, India*

- Developed a neural network architecture for detecting sudden cardiac arrests with a focus on minimizing memory footprint and optimizing for computational efficiency, consequently driving a **33.16% reduction in size** while preserving performance

LivNSense Technologies — Jun. 2021 - Sep. 2021
Intern | *Bangalore, Karnataka, India*

- Implemented and optimized a convolutional neural network for detecting fractures on industrial concrete and metal surfaces, achieving a **65% reduction in model size** through post-training quantization

TECHNICAL SKILLS

Languages: Python, C++, C, Java, Bash, SQL, JavaScript, HTML, CSS
Tools: Git, Docker, Kubernetes, AWS, Microsoft Azure, Databricks, Apache Spark, Hadoop, CMake, MLOps, CI/CD, Tableau
Libraries: PyTorch, TensorFlow, Keras, Scikit-Learn, ONNX, NumPy, pandas, Streamlit, OpenMP, CUDA, ROS2

PROJECTS

***SplinteRDMA*: Write-Optimized RDMA Database Cluster**

Integrated a write-amortized and size-tiered Bϵ-Tree index from SplinterDB into a Remote Direct Memory Access key-value store, resulting in an overall improvement of read and write performance by **over 66%**

***PowerNet*: Decentralized Federated Learning for Energy Consumption Forecasting**

Developed a federated learning system to forecast neighborhood electricity usage by training models across four clients, while ensuring data privacy and minimizing communication overhead

***NavigateSLC*: Interactive website of Salt Lake City**

Spearheaded a **top 10 award-winning** project to develop an interactive website with cutting-edge map-based visualizations that showcased Salt Lake City in all its macroscopic and block-wise intricacy

***RealSign*: Real-Time Bidirectional Sign Language Translator**

Engineered the **first** computer vision application for **real-time bidirectional** translation of Indian Sign Language and curated the **most extensive** image dataset for Indian Sign Language while addressing overlooked issues in existing datasets