Gundam Satyabhama Reddy

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Seeking Full-Time Software Engineer/Data Engineer Role
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Education

- **Texas A&M University** — College Station, TX
  Master of Computer Science; GPA: ***4.0/4.0*** — *Aug 2022 - May 2024*
  Coursework: Deep Learning, Parallel Computing, Analysis of Algorithms, Distributed Systems and Cloud Computing, Data Mining
- **PES University** — Bangalore, India
  Bachelor of Technology in Computer Science and Engineering; CGPA: ***9.56/10.0*** — *Jul 2016 - May 2020*

Technical Skills

- **Languages**: Java, Python, C++, C, C#, SQL, Bash, Go, Scala, R, JavaScript
- **Frameworks/Lib**: Flask, SpringBoot, Spark, Flink, JUnit, Scikit, React, PyTorch, gRPC, TensorFlow, Pandas, Numpy
- **Tools & Software**: AWS, Azure, Kubernetes, Hadoop, Zookeeper, Grafana, Git, Jenkins, Docker, Kafka
- **Databases**: MySQL, Snowflake, Prometheus, PostgreSQL, Druid, SingleStore, Hive, MongoDB
- **Certifications**: AWS Certified Cloud Practitioner, Advanced Java Programming, Learning Kubernetes

Work Experience

Teaching Assistant, Texas A&M University - College Station, TX — *Aug 2022 - Jun 2023*

- As a Teaching Assistant for the "Compiler Design" and "Distributed Systems" courses, organized office hours to assist students, oversaw assignments, enhanced course materials, and occasionally delivered lectures.
- **Compiler Design**: Designed and evaluated the course project to implement a custom language compiler, integrating lexical and syntax analysis, IR generation, optimizations, and code generation.
- **Distributed Systems**: Crafted assignments centered around creating a fault-tolerant "Chat System", enabling multiple clients to communicate through a resilient server. **Technolgies Used:** C++, gRPC, Virtual VMs

Software Engineer, Akamai Technologies - Bangalore, India — *Aug 2020 - Aug 2022*

- Designed and implemented non-blocking **asynchronous querying** Restful APIs into **ASGARD** - an in-house **Spark-based** data warehouse solution, enabling execution of batch jobs. This led to completely moving away from existing **Snowflake** infrastructure, resulting in **50%** cost savings for Akamai.
- Enhanced ASGARD's query API by building feature to collect **query statistics**, leading to better insights into metrics like IO & processing times, and data transfer volumes. These were leveraged to improve query performance by **30%**.
- Recognized with **Urgency & Persistence Award** for devising an automated process to rotate certificates essential for communication of 3000+ nodes, ensuring uninterrupted **ETL** operations and significant time savings for DevOps team.
- Received **One Akamai Award** for enhancing team productivity through onboarding a 10-member team on ASGARD.
- Created alerts & 15+ monitoring dashboards using **Prometheus Alertmanager, Slack, Splunk and Grafana.**
- **Technologies Used**: Python, Java, Go, Springboot, Spark, Kubernetes, Azure Service Bus, Blob Storage, Jenkins.

Spring Software Intern, Akamai Technologies - Bangalore, India — *Jan 2020 - Jul 2020*

- Designed and deployed a high-performance real-time processing system utilizing Spark streaming and Hadoop-stored data to evaluate the performance against an established solution at Akamai.

Summer Software Intern, Akamai Technologies - Bangalore, India — *Jun 2019 - Jul 2019*

- Conducted a comprehensive analysis of different data storage systems, including Druid, SingleStore, and an internal Akamai database. Executed stress tests with large data volumes to check for ingestion and query performances; identified and rectified bottlenecks, resulting in a **30%** increase in data processing speed.

Academic Projects

- **Image Classification**: Implemented DenseNet & ResNet architectures in Python with CUDA GPU acceleration for image classification on the CIFAR-10 dataset, achieving accuracies of 92% and 92.32% respectively. Elevated classification accuracy to 94.1% through strategic ensemble learning. **Used:** Python, PyTorch, Pandas, Numpy [Link]*(Aug - Dec 2022).*
- **Selfless Acts**: Developed a cloud-based application to share kind acts. Containerized the microservices using Dockers and built a custom-programmed orchestration engine which deals with Load Balancing, Fault-Tolerance, and Auto Scaling of containers. **Tools employed:** AWS VMs, MongoDB, Flask, HTML, CSS, Javascript, and PHP *(Jan - May 2019).*
- **Face Image Super Resolution using a Generative Adversarial Network**: Designed Face Image Super Resolution model using GAN, which outperformed alternative methods including Bilinear, Bicubic Interpolations and Artificial Neural Networks (ANN). The GAN-generated images achieved realistic outcomes with an impressive 8x upscaling, effectively capturing intricate facial details that were previously unattainable with other approaches. [Publication] *(Aug - Dec 2019).*
- **Cricket League Score Prediction**: Developed a cricket match prediction application utilizing Hadoop, Spark, BeautifulSoup module, K-means clustering, Map-Reduce, and Random forest. Analyzed players' and teams' performance data to forecast match outcomes, demonstrating proficiency in advanced technologies and data analytics *(Aug - Dec 2018).*

Extra Curricular Activities

- **Microsoft's WISE Mentorship Program**: Crafted innovative Class Scheduler app seamlessly integrated with Teams.
- **CSR Club, PES University**: Drove impactful social initiatives as an active volunteer of the club, organizing Blood Donation Camps, Tree Plantation drives, and the Swachh Bharat (Keep India Neat and Clean) campaign.