

Tejasree Parasa

+1 (856)-924-1200 | p.tejasree089@gmail.com | [linkedin.com/in/tejasree-parasa](https://www.linkedin.com/in/tejasree-parasa) | github.com/tpcodes24 | tejasree.vercel.app

EDUCATION

The Pennsylvania State University, University Park

Pennsylvania, USA

Master of Science in Computer Science and Engineering | GPA: 3.62/4.0.

August 2023 – March 2025

Leadership & Awards: Teaching Assistant – DBMS, Full Merit Scholarship, Executive Board - Graduate Women In Engineering

Velagapudi Ramakrishna Siddhartha Engineering College

Andhra Pradesh, India

Bachelor of Technology in Computer Science and Engineering | GPA: 3.94/4.0

July 2016 – July 2020

Leadership & Awards: Best Graduate, President - Entrepreneurship, CSE Innovation & ASSET Clubs, Python Instructor

PROFESSIONAL EXPERIENCE

Microsoft

Hyderabad, India

Software Development Engineer II: Azure Cloud & AI Domain

February 2022 – August 2023

- **Development Lead** – Led the engineering of **Azure Landing Zones** via the **Cloud Adoption Framework**, leveraging automation for multi-million-dollar cloud transformations, cutting manual effort by 90%, deployment time by 85%, and driving secure, scalable adoption.
- Engineered **distributed event-driven architectures** with Azure Services, applying CQRS and event sourcing to optimize low latency APIs via C#, .NET, and CosmosDB. Automated CI/CD, reduced data inconsistencies and sync drift by about 40%.
- Optimized **object detection and segmentation models** using TensorRT, Azure ML, and Data Factory, leveraging **MLOps**. Increased accuracy from 72% to 94% and sped up inference 5x with quantization, accelerating training with mixed-precision.

Software Development Engineer: Azure Cloud & AI Domain

August 2020 – February 2022

- Built **high-performance data platforms** using PySpark, Azure Databricks, and Delta Lake, integrating **hybrid batch-stream processing**. Optimized storage with Z-Ordering and file compaction, streamlining ETL and accelerating model training by 3x.
- Headed **large-scale cloud migrations**, reducing support costs by 60% and **modernizing 1,000+ apps** via rehosting, refactoring, and optimization. Managed greenfield and brownfield deployments, utilizing FinOps to maximize ROI and efficiency.
- **Recognition:** 3x Awarded, Led technical mentorship for FY22/FY23 hires and Interns 4Africa. Leadership initiatives as resource lead for “Advocacy for Yourself” Women at Microsoft ERG. Directed Growth Group Cohorts across 6 countries.

Indian Servers | Machine Learning Intern

January 2020 – June 2020

- Architected a **Transformer-GNN hybrid in TensorFlow**, fusing self-attention with graph convolution to enhance long-range dependency modeling for **scene understanding in autonomous navigation**, improving object interaction and spatial reasoning.
- Accelerated a high-performance software pipeline with **parallelized kernel execution** and layer-wise memory scheduling, reducing inference latency by 52% and memory footprint by 35% for **real-time large-scale graph processing**.

iON Technologies | IoT Research Intern

March 2019 – June 2019

- Designed an **IoT smart medicine box** for Alzheimer's care with edge computing, real-time tracking, and dosage reminders. Tested on 200+ patients using a **dynamic buffer pool, federated learning**. Secured R&D grant, patent. | Arduino, Android

ACADEMIC PROJECTS

- **Metagenomics Knowledge Graph** - Built a deep learning-driven KG for metagenomic analysis, optimizing embeddings and pathogen discovery to uncover microbial patterns, process millions of interactions, enhance disease predictions, and boost TPR by 22 points in novel pathogen detection. | PyTorch Geometric, Apache Spark, Neo4j, Docker, Kafka
- **Real-Time Automatic Detection of Motorcyclists With and Without a Safety Helmet** - Developed a high-accuracy (87.6%) AI system for helmet detection using SVM-HoG, reducing accident fatalities by 37% and enabling real-time traffic monitoring, published in [IEEE](#). | Computer Vision, Numpy, Pandas, OpenCV, SKLearn
- **Scalable Distributed File System** – Designed a high-performance system with gRPC, bidirectional streaming, token-based access control, and sequential consistency, ensuring 99.99% uptime (sub-10ms latency) and scaling across multiple servers.
- Implemented a **fault-tolerant distributed key-value store using Paxos**, optimizing client-server communication, state sync, and request handling. Enhanced concurrency with adaptive batching, garbage collection, and scalable memory. | Go, RPC

TECHNICAL SKILLS

- **Programming:** Python, C, C++, C#, ASP.NET, Java, R, JavaScript, Node.js, React, GraphQL
- **AI & ML:** Neural Networks (CNNs, GNNs – GCNs, GATs), NLP, Computer Vision, PyTorch, TensorFlow, ONNX, MLOps, LLMOps
- **Cloud & DevOps:** Azure, AWS, GCP, Kubernetes, Docker, CI/CD, Terraform, Apache Kafka
- **Databases:** PostgreSQL, MySQL (Relational), MongoDB, Redis (NoSQL), Neo4j (Graph)
- **Systems & Architecture:** Distributed Systems, Microservices, Observability, Linux | **Frameworks:** Spring Boot, Flask, Postman
- **Relevant Courses:** Data Structures & Algorithms, Object-Oriented Programming, Advanced Database Management Systems, Operating Systems, Computer Networks & Architecture, Natural Language Processing, Deep Learning with Graphs, Computer Vision

PROFESSIONAL CERTIFICATIONS

- **Microsoft Certified** ([credly.com/users/teja-sree-parasa](https://www.credly.com/users/teja-sree-parasa)): Azure Data Scientist Associate (DP-100), Azure Administrator Associate (AZ-104), DevOps Engineer Expert (AZ-400), Azure AI Engineer Associate (AI-102), Power Platform Developer Associate (PL-400), Azure Fundamentals (AZ-900), Azure Data Fundamentals (DP-900), Azure AI Fundamentals (AI-900), Power BI Data Analyst (PL-300)
- **Other Certifications:** CISCO – CCNA (Cisco Certified Network Associate), Salesforce – Business Administration Specialist