

TEJA POTU

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EDUCATION

Doctor of Philosophy in Computer Science, Florida State University, GPA: 3.92 Jan 23 - Dec 27(Expected)

SKILLS

Languages : Python, C/C++, Java, TypeScript, JavaScript, SQL
ML & DL : PyTorch (DDP, AMP), TensorFlow, Hugging Face, Scikit-learn, GNN, RL, GANs
LLMs & NLP : Transformer architectures, RAG, prompt engineering, LangChain, ChromaDB, SciBERT
Frameworks : FastAPI, React, Next.js, CrewAI
Data & Tools : NumPy, Pandas, MLflow, Docker, Git, Firebase, PostgreSQL
Systems : AWS (EC2, S3, Lambda, SageMaker), GCP, Docker, HPC (SLURM), CI/CD, REST APIs

EXPERIENCE

Research Assistant [National High Magnetic Field Laboratory] May 2024 – Present

- Built **GraphAttribution**, a graph-based ML pipeline achieving **97% accuracy** and **10× faster runtime** for molecular formula assignment in high-resolution mass spectrometry.
- Designed an **autonomous LLM-powered analysis system** using **RAG**, **tool-using agents**, and domain-tuned prompts (LangChain + ChromaDB), deployed on **AWS** (EC2, S3, Lambda) as a **FastAPI service** for end-to-end mass-spectrometry data interpretation.

Graduate Teaching Assistant [Florida State University] Jan 2024 – May 2024

- Assisted in teaching **Coding Bootcamp** and **Introduction to Programming (Python)** courses, mentoring students and designing hands-on coding assignments.

Researcher (Master's Thesis) — Single-Cell Clustering Dec 2023 – Dec 2024

- Developed a **tumor-clone clustering method** increasing accuracy from **22% to 84%** by modeling single-cell genomic data as graphs and applying an **attention-based GCN**, processing datasets with **10K+ cells**.

Graduate Software Engineer [Meeami Technologies] Aug 2021 – Dec 2022

- Improved on-device **deep learning inference** by **44%** through profiling, operator-level optimization, and SIMD kernel engineering; integrated into a **C++ production SDK** deployed across mobile and embedded.
- Built **10× smaller** speech models with **16% quality improvement**, using **MLflow** for experiment tracking, model versioning, and **automated CI/CD pipelines** for reproducible training and deployment.

SELECTED PROJECTS

- Built **CaseTwin**, a full-stack clinical decision-support platform (React + FastAPI + Firebase) that automates case matching and referral documentation using **CrewAI agents**, **medical image RAG**, and a **MedGemma endpoint on AWS** (EC2 + SageMaker), reducing a 4-hour workflow to **5 minutes**.
- Developed **Questory**, a narrative-driven EdTech platform (TypeScript + FastAPI + Firebase) using **Google Gemini Live API** for real-time interactive storytelling, deployed on **GCP**.
- Built **CheckUp**, a WhatsApp-based AI assistant (Python + Twilio + LLM) that automates daily wellness check-ins for elderly parents, supporting **multilingual conversations**, medication reminders, and real-time health alerts for remote caregivers.

PUBLICATIONS

- T. Potu et al. *SCGclust: Single Cell Graph Clustering Using Graph Autoencoders Integrating SNVs and CNAs*. bioRxiv, 2025.