

SREE TEJA NADELLA

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EDUCATION

- University of California, San Diego** California, USA
Master's of Science in Computer Science; CGPA: 4.00/4.00 Sep 2024 - May 2026 (Expected)
Relevant Coursework: Statistical Natural Language Processing, AI Agents, Recommender Systems, Fairness-bias and transparency in Machine Learning, Design & Analysis of Algorithms
- National Institute of Technology, Durgapur** West Bengal, India
Bachelor's of Technology in Computer Science; CGPA: 3.97/4.00 Dec 2020 - May 2024
Relevant Coursework: Artificial Intelligence, ML, Soft Computing, Databases, Object Oriented Programming, Data Structures & Algorithms, Software Engineering, Computer Organization & Architecture, Signals & Systems

SKILLS

- Languages & Libraries:** Python (NumPy, Pandas, Seaborn, PyTorch, TensorFlow, sklearn), C, C++, Go, JavaScript, SQL
- Natural Language Processing (NLP):** LLM, SLM, Transformers, LangChain, Fine-tuning, LoRA, RAG, Vector Databases
- Reinforcement Learning (RL):** Q-Learning, DQN, Multi-agent Systems, Policy Optimization, Reward Shaping
- Computer Vision:** Diffusion Models, OpenCV, CNN, Vision Transformers, Object Detection, GANs, Autoencoders
- Big Data & Analytics:** Apache Spark, Databricks, MongoDB, Apache Kafka, Tableau, Looker, SQL (MySQL, PostgreSQL)
- Cloud & DevOps:** AWS, GCP, Docker, Kubernetes, MLflow, GitHub Actions, Git, Linux

EXPERIENCE

- PepsiCo |Pricing Strategy, Delivery Optimizations** Telangana, India
Global IT Intern Jan 2024 - July 2024
 - Engineered a scalable data pipeline for **causal inference** on **1.3M+** records across regions, retailers, and stores.
 - Leveraged **SHAP** values and elasticity metrics to assess price impact on demand, improving pricing strategy by **9%**.
 - Developed **delivery time estimation** models by integrating **5+** data sources, reducing estimation variance by **3%** and improving logistics reliability.
- National Institute of Technology, Durgapur |Privacy-Preserving ML, Classification** Durgapur, India
Research Assistant Jan 2023 - Dec 2023
 - Designed a privacy-preserved **federated learning** framework for remote hemiplegia diagnosis, improving accuracy to **93%**.
 - Integrated **GANs** for data augmentation and applied the **Whale Optimization Algorithm** for model optimization.
 - Developed a **differential privacy**-based ML model for hemiplegic classification using smartphones IMU data with **inverse wavelet** decomposition.
- Indian Institute of Technology, Indore |Algorithm Optimization, Regression** Remote - India
Summer Research Intern May 2023 - June 2023
 - Collaborated with the research team to modify the neural network architecture, reducing mean squared error by **2%**.
 - Explored various neural network **architectures for regression**, including **Radial Basis Function Networks**, improving model performance by **9%**.

PROJECTS

- Medical Disease Prediction Using Patient Narratives [Report] |UCSD**
 - Fine-tuned state-of-the-art NLP models (BERT, RoBERTa, DeBERTa) for disease prediction from patient narratives
 - Trained the **paraphrase-MiniLM** model from scratch, surpassing baseline performance by **7%**.
- Evaluating Reasoning Capabilities of Language Models in Chess [Report] |UCSD**
 - Employed small language models (1.5B & 7B) and reinforcement learning (GRPO) for chess reasoning, designing and experimenting with reward mechanisms and various state representations.
 - Evaluated fine-tuned and frontier LLMs against Stockfish, identifying limitations in complex strategic reasoning domains.
- Course projects | RAG System Using Langchain, AI Game Master using LLM Agents and Tool Use**

PUBLICATIONS & PATENTS

- PrivLet: Differential Privacy and Inverse Wavelet Decomposition Framework for Secure and Optimized Hemiplegic Gait Classification** Biomed. Signal Process. Control. 96 (2024)
- A Comparative Study on Effect of Activation Function Placement in Neural Network Architecture for Regression Problems**, IEEE Information and Communication Technology Conference (2023)
- Patent: Virtual Reality Kinetic Mapping: AI-Powered Realistic Physical Interaction in VR** DPMA (waiting for grant)-an AI-driven solutions integrating self-powered Triboelectric Nanogenerators (TENGs) for enhanced sensor efficiency
- Patent: AI based Lung Node Sinusitis Detection** DPMA (waiting for grant)- Utilized AI for diagnosing pulmonary nodules through computed tomography (CT) scans.