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 - 2026 (Expected)*
  Relavent 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: 4.00/4.00 — *Dec 2020 - May 2024*
  Relavent Coursework: Distributed Systems, Databases, Object Oriented Programming, Data Structures & Algorithms, Software Engineering, Computer Organization & Architecture, Artificial Intelligence, ML, Soft Computing, Signals & Systems

Skills

- **Programming Languages**: Python, C, C++, JavaScript, Typescript, Go, Rust, SQL , HTML, CSS
- **ML Libraries**: PyTorch, TensorFlow, Transformers, Scikit-Learn, Pandas, Seaborn, NumPy, OpenCV, LightGBM, MLflow
- **Cloud & DevOps**: AWS , GCP , Terraform, Docker, Kubernetes, CI/CD (GitHub Actions, Jenkins), Git, Linux
- **Big Data & Analytics**: Apache Spark, Databricks, MongoDB, Apache Kafka, Tableau, Looker, SQL (MySQL, PostgreSQL)
- **Web Technologies**: React, Node.js, Flask, Django, Express.js, FastAPI, REST APIs, GraphQL, Next.js, Redis, WebSockets

Experience

- **PepsiCo** |***python, tensorflow, sklearn, pyspark ,matplotlib, seaborn*** — Telangana, India
  Global IT Intern — *Jan 2024 - July 2024*
  - Conducted **causal inference** on a dataset of over **1.3 million** records, spanning regions, retailers, and stores, utilizing **SHAP** values and elasticity metrics to assess the impact of price changes on demand. Led data preprocessing, feature engineering, and model selection, achieving a **9%** improvement in pricing strategy efficiency.
  - Partnered with stakeholders to develop robust **delivery time estimation** models, successfully integrating data from **5+** data sources using distributed processing. Streamlined operations, reducing delivery time estimation variance by **3%**, which contributed to a more reliable logistics process and improved customer satisfaction.

- **Indian Institute of Technology, Indore** |***python, pytorch, matplotlib, sklearn*** — Remote - India
  Summer Research — *May 2023 - June 2023*
  - Explored various neural network **architectures for regression**, including **Radial Basis Function Networks**, conducting a comprehensive examination that improved model performance by **9%** and coordinated closely with the research team to modify the neural network architecture which demonstrated a **2%** impact on reducing mean square error.

Projects

- **Tomato: Online Food Ordering Application** |*MongoDB, Express.js, React.js, Node.js (MERN Stack)*
  - Developed a full-stack online food ordering platform with an interactive React.js frontend for browsing and ordering food, along with an admin dashboard for managing menu items with real-time updates in MongoDB.
  - Optimized API performance and handled concurrent operations efficiently using Node.js's non-blocking I/O model.
- **AI based Image Caption Generation Application** |*react.js, flask, pytorch, python, PostgreSQL, Redis, GCP*
  - Developed an AI-powered image captioning application enabling users to upload images and receive AI-generated descriptions, featuring a responsive UI, user authentication, and smooth animations for an enhanced user experience.
  - Integrated **Google Cloud Platform (GCP)** for efficient image storage and retrieval, ensuring scalability and reliability.
- **Medical Disease Prediction Using Patient Narratives** |*python, pytorch, Hugging Face Transformers, LORA*
  - Fine-tuned the **paraphrase-MiniLM** model from scratch to predict diseases using patient health narratives.
  - Compared performance with other fine-tuned transformer models such as **BERT, RoBERTa, BioBERT**, and **DeBERTa** on the **Haodf dataset**.
- **Course projects** | *Full Stack Blog Application, (Retrieval-Augmented Generation) RAG System Using Langchain*

Publications & Patents

- S. Adhikary, S.Varalasetty, **S.Nadella**, et al."**PrivLet: Differential Privacy and Inverse Wavelet Decomposition Framework for Secure and Optimized Hemiplegic Gait Classification**" Biomed. Signal Process. Control. (2024)
- S. Adhikary, **S.Nadella**, et al., "**FedPlegia: Hemiplegia Severity Gradation by Evolutionary Optimization and Privacy Preserved Federated Learning**" ACM Transactions on Computing for Healthcare (in-review)
- "A. Srivastava et al., **"A Comparative Study on Effect of Activation Function Placement in Neural Network Architecture for Regression Problems,"** 2023 IEEE 7th Conference on Information and Communication Technology (CICT), Jabalpur, India, 2023, pp. 1-6,
- "**Patent: Virtual Reality Kinetic Mapping: AI-Powered Realistic Physical Interaction in VR**"(waiting for grant)
- "**Patent: AI based Lung Node Sinusitis Detection**"(waiting for grant)