

Nanda kumar reddy Peddagorla

+1 (402) 855 5590, nandakumarreddypg@gmail.com, [Linkedin](#), Ready to relocate. Available immediately

EDUCATION

University of Louisiana at Lafayette, Louisiana, USA

January 2023 - May 2024

Master of Science (M.S) in Computer Science (C.S)

Key Courses : Deep learning, Image processing, Neural networks, Operating systems, Design and analysis of algorithms, Pattern recognition, Database Management systems

Shanmugha Arts, Science, Technology & Research Academy (SASTRA), Thanjavur, India

June 2017 - May 2021

Bachelor of Engineering - BE, Information Technology

Key Courses : Machine Learning, Cloud computing, Data structures, Mathematics, Software development life cycle

Certifications and Licenses

- *Certified Tensorflow Developer | certified by Tensorflow*
 - *AWS Certified Machine Learning - Specialty | certified by AWS*
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TECHNICAL SKILLS

Scripting Languages : Python, Java, Go, SQL(Data querying), C, C++

Computer Vision : Open CV, U-Net, Yolo

ML Frameworks : Tensorflow, Pytorch, Scikit-learn, SpaCy, LangChain, Hackstack, Transformers

Data Mining and Data Analysis : SAS, Tableau, Power BI, Matplotlib, Seaborn, Pandas, Exploratory Data Analysis (EDA)

Statistical Analysis): Hypothesis testing, Regression analysis, A/B testing ,ANOVA, Time series analysis, Spectral analysis

Databases and Web services : Vector Database , Graph Database, MySQL, NoSQL, AWS DynamoDB, Redshift, REST API

Machine Learning : Regression, Classifier, Clustering, forecasting, Anomaly detection, Recommender systems

Deep learning : CNN, NLP, NLU, Attention spectral models, LLMs(Chatbots, Agents, Speech to text, Prompting)

MLOps : CI/CD data pipeline, Jenkins, GITHUB, Confluence, GCP Vertex AI, AWS Sagemaker, AutoML

WORK EXPERIENCE

Graduate Research and Teaching assistant - University of Louisiana, LA

August 2023 - May 2024

- Designed and implemented a distributed federated learning foundational framework with singleton design patterns for collaborative model training. The project leveraged secure communication between clients and a central server to train a machine learning model without sharing sensitive data.
- Investigated the challenges in fine-tuning and adapting Large Language Models (LLMs) for specific use cases, focusing on task-mismatch, bias mitigation, catastrophic forgetting, and overfitting.
- Evaluated the effectiveness of the multi-task fine tuning and scalability of T5, Llama, and GPT with prototypes .
- Crafted assignments and laboratory exercises covering key concepts presented in the course.
- Coordinated with students, reviewed their progress and resolved questions to enhance comprehension of the subject.

Junior Data scientist and intern - TATA CONSULTANCY SERVICES

June 2020 - January 2023

- Collaborated in an Agile software development life cycle environment, actively participated in cross functional team review, ensuring code delivery aligned with strong leadership and communication skills.
 - Developed and deployed in production an end-to-end time series predictive model using XGBoost to forecast potential delivery delay utilizing company's supply chain data. Effectively communicated predictions to customers through CRM, leading to improved customer service experience and enhanced planning.
 - Presented insightful reports and dashboards using business intelligence tools , communicating critical findings to facilitate informed data-driven decision making by the management team.
 - Optimized CRM campaign deliverables based on business requirements significantly improving performance.
 - Ensured seamless integration of automation solutions, enhanced product features, and drove customer engagement.
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PROJECTS

OpenAI TelegramBot Integration

Open AI API ,GPT, Generative AI

- Upgraded a Telegram chatbot with OpenAI as the backend to facilitate intelligent interactions. Leveraged OpenAI's capabilities for interpreting user queries for e-commerce, generating responses, and managing conversations seamlessly.

Flower Classification Using Transfer learning

CNNs, Jupyter Notebooks, Computer Vision

- Engineered CNN models for precise flower classification fine tuning EfficientNetB7 and ResNet50 architectures. Trained on a dataset of 13,000 images spanning 102 class labels. Achieved significant accuracy improvements.

Llama fine tuning using LoRA

LoRA, Llama, Jupyter Notebooks, Fine tuning

- Implemented LoRA fine-tuning on Llama 1.1B using the Guanaco chat dataset. Utilized HuggingFace Transformers libraries (PEFT, TRL, Trainer) for efficient model adaptation.