DSN Naveen Kumar

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CAREER OBJECTIVE

I am Data Scientist with over 3 years of Experience skilled in supervised and unsupervised learning, deep learning, and NLP. Proven track record in optimizing model inference and deploying scalable, production-grade AI solutions to solve real-world problems efficiently.

PROFESIONAL EXPERIENCE

AI ML Engineer, HLKlemove India Tech Private Limited

Bangalore, India | July 2025 – Present

- Spearheading enhancements in Trailer Parking Assistance systems by optimizing sensor fusion algorithms and deep learning models using **CUDA-based multi-GPU distributed processing**, improving precision, reducing parking time, and enhancing driver safety.

Machine Learning Engineer, Exafluence

Bangalore, India | Feb 2023 – June 2025

- Solve complex supervised and unsupervised learning challenges using advanced deep learning techniques.
- Optimize machine learning inference and deploy models efficiently for scalable, high-performance applications which help to get several clients for us.

Sensor Health & Anomaly Analytics

- Developed a scalable end-to-end sensor health monitoring system using custom clustering and anomaly detection algorithms, achieving 95% accuracy in identifying irregularities across 10,000+ sensors and gateways. The solution processes data in real-time, enabling proactive maintenance and reducing unplanned downtime by 40% through early defect detection.
- Reduced maintenance costs by 25% and improved operational efficiency by delivering actionable insights via a unified dashboard, empowering customers to resolve 80% of anomalies within 2 hours. The system's modular architecture supports seamless scaling to 50,000+ devices, ensuring sustained performance optimization for diverse IoT deployments.

AI-Powered Applications

- Developed an NLP-SQL chatbot with 80% accuracy, cutting database analysis time by 40%, and integrated a RAG framework that sped up query processing by 60% while improving information relevance by 25%
- **Fine-tuned advanced LLM models** and integrated a vector database with a Retrieval-Augmented Generation framework, **leveraging CUDA-based multi-GPU distributed** to accelerate training and inference for optimized query processing.
- Engineered a comprehensive NER pipeline to extract diverse entities from unstructured documents for actionable insights. Developed an automated, end-to-end solution using Spacy and advanced NLP models to systematically classify key entities.
- Developed a document Q&A chatbot for research paper analysis, leveraging RAG-based vector databases and a custom fine-tuned LLM, deployed using **Azure Machine Learning and Azure Kubernetes** for scalable performance, reducing client document review time by 80% and enhancing efficiency in data extraction and knowledge discovery workflows.
- Delivered an end-to-end solution that streamlined database interactions, empowering users with self-service data access and contributing to a 15% reduction in reliance on data analysts. Integrated **MLOps** best practices including CI/CD pipelines, automated testing, and model monitoring for seamless and maintainable operations.

TECHNICAL SKILLS

- Machine Learning & Deep Learning: CNNs, RNNs, Transformers, Model Training , Fine-Tuning, Transfer Learning, TensorFlow, PyTorch, Fine-tuned advanced LLM models, **Lora, Qlora, Peft, Tokenizer**.
- NLP : NER, Text Classification, Sentiment Analysis, spaCy, NLTK, Large Language Models (LLMs), **CUDA**
- Computer Vision: Image Classification, Object Detection, Image Segmentation, OpenCV, PIL.
- Tools & Technologies: Python, SQL, Git, Docker, Kubernetes, AWS, **Azure**, MLFlow, DVC, Fast API, Flask, **MLOps**, C, C++

EDUCATION

Bachelor of Engineering in ECE 2017-2021

JNN College Affiliated to Anna University, Chennai, India CGPA: 8.3

CERTIFICATES

- Deep Learning Specialization, deeplearning.ai (Sep 2022 – Dec 2022)
- TensorFlow Developer Specialization, deeplearning.ai (Aug 2022 – Oct 2022)