Naveenkumar Narsozhan

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Education

University of Southern California, *Master of Science in Computer Science* - ***CGPA: 3.65/4.0*** Aug 2025 - May 2027

- Relevant Courses: Analysis of Algorithms, Information Retrieval, Machine Learning, Deep Learning

NIT Puducherry, *Bachelor of Technology in Computer Science and Engineering* — ***CGPA: 9.3/10.0*** Dec 2020 - May 2024

- Relevant Courses: Artificial Intelligence and Expert Systems, Soft Computing Techniques, Pattern Recognition, Big Data

Technical Skills

Programming Languages and Tools: Python, C, C++, Azure (App Service, SQL Database, DevOps), SQL, Git, Docker
Libraries: pandas, numpy, matplotlib, seaborn, scikit-learn, XGBoost, TensorFlow, Keras, PyTorch, nltk, spaCy, Transformers, Stable Baselines3, Gym, sentence-transformers, ChromaDB, OpenCV
Technologies and Skills: CNNs, Time Series Forecasting, Classification, Regression, Clustering, Hyperparameter Tuning, Model Evaluation (F1, BLEU, Dice, IoU), NLP, Generative AI, LLMs, RAG, Embedding-Based Retrieval, Computer Vision, Reinforcement Learning, Data Preprocessing, Feature Engineering, Exploratory Data Analysis, Model Deployment, Cloud-Based ML Pipelines

Professional Experience

HCL Tech - Madurai, Tamil Nadu, India, *Technical Lead* Sep 2024 - Jul 2025

- Completed an intensive full-stack training program in the Microsoft ecosystem (C#, .NET, Angular, Microsoft SQL Server); built a capstone project simulating enterprise workflows and large-scale system design.
- Trained in Microsoft Azure services, including App Service, Azure SQL Database, and Azure DevOps, gaining expertise in cloud migration and deployment pipelines.
- Contributed to migrating a legacy corporate website (50K+ monthly users) from on-premise servers to the Azure platform, improving availability and reducing infrastructure costs by an estimated 20%.

National Institute of Ocean Technology - Chennai, India, *Machine Learning Research Intern* May 2023 - Jun 2023

- Performed extensive exploratory data analysis (EDA) on 1 million+ meteorological and oceanographic data points to study factors influencing fuel efficiency in ship routing.
- Developed a robust data preprocessing pipeline to clean, integrate, and normalize raw datasets (CSV to Excel transformation, handling missing values, feature scaling).
- Analyzed ship trajectory data in conjunction with environmental features, identifying key variables impacting optimal navigation.

Projects

Kuri AI – LLM-Driven Task Understanding System Nov 2025 - Present

- Architected an LLM-driven task intelligence pipeline (Gemini API) enabling intent classification, semantic understanding, hierarchical task decomposition, and open-set task categorization beyond predefined classes.
- Engineered a multimodal natural language processing (NLP) pipeline supporting both voice and text inputs, integrating speech-to-text, compound task segmentation, and temporal entity extraction to produce structured task representations.
- Designed and implemented an agent-based automation and orchestration layer to execute task routing, enforce user validation, and synchronize time-sensitive workflows with Google Calendar via API-driven scheduling automation.

Valorant Strategy Assistant - RAG Chatbot Sep 2025 - Present

- Built a Retrieval-Augmented Generation (RAG) system using sentence-transformers and ChromaDB, indexing 50+ Valorant knowledge documents for low-latency semantic search.
- Integrated a quantized 7B parameter Mistral LLM, optimizing prompt construction and achieving a 30% faster inference pipeline.
- Developed a context-aware Q&A chatbot that delivers accurate, strategy-focused answers and minimizes irrelevant responses.

Aerial Image to Map Translation Dec 2023 - Jan 2024

- Studied original Pix2Pix research paper and implemented conditional GAN to translate aerial imagery into cartographic maps.
- Conducted extensive training and fine-tuning of model on specialized geo-spatial datasets, delivering high-quality outputs optimized for practical mapping applications.
- Validated model by reproducing high-fidelity map outputs, demonstrating practical understanding of Pix2Pix architecture and image-to-image translation principles.

COVID-19 & Pneumonia Classification from Chest X-rays Oct 2023 - Nov 2023

- Designed and implemented a two-stage Convolutional Neural Network (CNN) pipeline for automated medical image classification, handling datasets across three categories: Normal, COVID-19, and Viral Pneumonia.
- Engineered Classifier 1 for abnormality detection (Normal vs. Abnormal) achieving 91% accuracy, followed by Classifier 2 for disease specification (COVID-19 vs. Viral Pneumonia) attaining 96% accuracy.

Certifications

Machine Learning Specialization — Coursera (Andrew Ng, Stanford University), May 2023
Build with AI: Create an Agent with GPT-OSS — LinkedIn Learning, Dec 2025