



Narasimha Karthik J

☎ (440)723-0268 ✉ narasimhajwalapuram2026@u.northwestern.edu  [linkedin.com/in/narasimhakarthik](https://www.linkedin.com/in/narasimhakarthik)  neuraforge.substack.com

EDUCATION

Northwestern University, Master of Science in Artificial Intelligence *Expected Graduation: Dec 2025*

PES University, BTech in Electronics and Communication Eng *Graduated: Sept 2022*

SKILLS

Languages: Python, C, Swift, Javascript

Frameworks: PyTorch, Tensorflow, Transformers, LangChain, FastAPI, Linux, OpenCV, Azure, AWS, Docker

EXPERIENCE

The Boeing Company

Bengaluru, India

Software Engineer | Data Scientist

July 2022 – Aug 2024

- Developed an Intelligent Aircraft Maintenance Manual (AMM) Update System using custom Markdown based PDF parsing, LLM-based extraction, and ChromaDB vector store, reducing manual effort by 80%
- Enhanced document retrieval by implementing Retrieval Augmented Generation (RAG) with OpenAI embeddings and ChromaDB index, improving query relevance by 40%
- Secured \$200k funding by demonstrating business value of AI-driven document automation
- Created a dynamic cost prediction models for airplane parts in TearDown lab, reducing end-to-end modeling and cost estimation time by 70% using a dataset with 2M+ rows.
- Contributed in development of NLP-LLM community of practice as core member. Took 3 sessions sharing best practices on working with LLMs, RAG and Generative AI.
- Led hiring process for ML Engineers, successfully onboarding 6 candidates from a pool of 50 applicants

Software Engineering Intern

July 2021 – June 2022

Invento Robotics Inc

Bengaluru, India

- Developed 'Invento Fleet' iOS app with 10+ core features, increasing remote robot control efficiency by 70%.
- Implemented audio-video communication using TwilioVideo and WebRTCLib, reducing web portal dependence by 90%.
- Refined YOLOv5-based object detection model for Fall Detection, reducing false negatives by 95%.

PROJECTS

Real-Time Options Trading Intelligence Platform - Northwestern University

Oct 2024 - Present

- Advanced options trading bot that combines real-time market data analysis with sentiment-driven insights to execute strategic trades
- The platform features a live dashboard for monitoring market movements, sentiment shifts, and trading performance in real-time.

Publisher - NeuraForge: AI Newsletter

Aug 2023 - Present

- Publishing technical articles, code based tutorials as newsletter on Generative AI, Reinforcement Learning and Machine Learning. Link to the blog: [Neuraforge](https://neuraforge.substack.com)

Team Lead - E-yantra Robotics Competition

Sept 2020 - May 2021

- Led a 4-person team in developing an automated warehouse system using ROS and Gazebo; optimized simulation performance by 50% through multi-threading and asynchronous operations, resulting in a 25% reduction in total time
- Developed a real-time package status update website with a 2-second refresh rate, contributing to a near-perfect competition score of 97.96/100

Core Member - Team Aeolus

Sept 2019 - Sept 2020

- Simulated and tested drone and quadcopter operations using ROS and Gazebo, collaborating with a team of 8 to design and build drones for inter-college robotic competitions.

ACHIEVEMENTS & AWARDS

- Bureaucracy Crusher Award, SoCal Gemba Fest, Nov 2023 - Boeing Research & Technology.
- CANDI Land Hackathon (Sept 2023) - Boeing Research & Technology
- GT TechFest Innovation Challenge (March 2023) - Boeing Research & Technology (Predictive Maintenance)