Naveen Prashanna Gurumurthy

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Summary

- Software engineer with 2+ years of experience designing, building, and deploying scalable Web and ML systems.
- Expertise in developing trading systems, end-to-end ML pipelines, and CI/CD workflows for Gen-AI applications.
- Proven ability to bridge the gap between data science & software engineering to deliver production-grade solutions.

Education

***Master of Science*, University of Texas at Dallas (UTD)** | Dallas, TX **Aug 2023 - May 2025**

- Major: Computer Science | Specialization: Intelligent System

***Bachelor + Master of Technology*, Indian Institute of Technology (IIT) Madras** | India **Aug 2017 - May 2022**

- Major: Mechanical Engineering | Minor: Artificial Intelligence & Machine Learning

Technical Skills

- **Languages:** C++, Python, Javascript, TypeScript, SQL, R, MATLAB, Bash
- **Frameworks:** PyTorch, Tensorflow, Scikit-learn, LangChain, Vue.js, React.js, FastAPI, Hadoop, Spark
- **Software & Tools:** GCP, DataBricks, Docker, Kubernetes, AWS, Snowflake, MongoDB, PostgreSQL, Jenkins

Professional Experience

***AI Engineer*, Kahana Group Inc** | United States **Feb 2025 - Present**

- Spearheaded the development of user-centric UI/UX features using React.js, to create a intuitive and responsive interface that improved user engagement by 12% and overall usability.
- Integrated robust data analytics tools into our core product, providing real-time insights that directly influenced a product strategy shift which resulted in a 10% increase in subscription revenue.
- Engineered a LangChain-based AI browser assistant to let users perform actions with natural language commands, using LangGraph to model state transitions and LangSmith for real-time activity tracking and system refinement.

***Software Engineer*, Quantitative Brokers** | Chennai, India **Jul 2022 - Jan 2023**

- Engineered a proprietary internal tool to automate the creation and transmission of FIX order messages, which eliminated manual processes and streamlined high-frequency trading operations.
- Enhanced the core FIX messaging platform by integrating robust support for Multi-Leg trade orders, which boosted operational efficiency by 15% and enabled the firm to expand its product offerings.
- Designed and optimized decentralized database solutions using PostgreSQL, enhancing database efficiency and reducing query latency by 10% to support real-time data needs.

***Software Engineer Intern*, Quantitative Brokers** | Chennai, India **Jun 2021 - Jan 2022**

- Developed a highly interactive Vue.js web application to visualize operational costs across global trading exchanges and network infrastructure, providing real-time insights that led to a 6% reduction in annual network expenditures.
- Led the strategic integration of SonarQube and BlackDuck into the Jenkins CI/CD pipeline, which automated code quality analysis and vulnerability scanning, enhancing application security and reducing critical risk factors by 20%.

***Machine Learning Engineer Intern*, Big Data Science Research** | Bangalore, India **Apr 2020 - Jun 2020**

- Developed and deployed a machine learning pipeline using Python and scikit-learn to predict urban traffic patterns, enhancing model accuracy by 15% through the integration of geospatial data features.
- Implemented a novel map-matching algorithm to refine GPS data, significantly improving the precision of traffic flow models and reducing prediction error by 20%.

Projects

***Generative AI Engineer*: Personal Assistant Chatbot** | Personal Project **Apr 2025 - May 2025**

- Fine-tuned the Mistral LLM using a custom QLoRa approach on a specialized dataset, which reduced the model's memory footprint by 40% while maintaining 98% of its original performance.
- Integrated a Retrieval-Augmented Generation (RAG) pipeline to retrieve embeddings from personal documents, which decreased response latency by 160ms and reduced factual inaccuracies (hallucinations) by 75%.

***ML Engineer*: Anthropic's Computer Control** | Personal Project **Feb 2025 - Mar 2025**

- Developed a LangChain-based system for Mac control, successfully replicating core functionalities of Anthropic's Computer Control tool to enable natural language-based desktop automation.
- Implemented custom tools for text simulation, mouse automation, and application management, which reduced average task completion time by 30% by eliminating manual steps.

***RL Engineer*: Trajectory-Aware Human Feedback for Hierarchical RL** | UTD **Sep 2024 - Dec 2024**

- Proposed a novel Hierarchical Reinforcement Learning framework to improve subgoal generation in complex tasks, demonstrating a new approach for solving long-horizon problems.
- Deployed the Deep-RL framework in the FetchReach environment, resulting in a 10% increase in task success rates by effectively breaking down complex goals into manageable sub-goals.