Naveen Prashanna Gurumurthy

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Education

Master of Science, University of Texas at Dallas (UTD) | Dallas, TX **Aug 2023 - May 2025**
Major: Computer Science | **Specialization: Intelligent System** | GPA: 3.55/4

Bachelor + Master of Technology, Indian Institute of Technology (IIT) Madras | India **Aug 2017 - May 2022**
Major: Mechanical Engineering | **Minor: Artificial Intelligence & Machine Learning** | GPA: 3.24/4

Technical Skills

Languages	C++, Python (Scikit Learn, PyTorch, Tensorflow), Javascript, NodeJS, React, Java, PostgreSQL
Software & Tools	ROS (Robot Operating Software), DataBricks, MATLAB, Visual Studio, Android Studio, Git, LaTeX
Certifications	Design and Analysis of Algorithms, Android Development by Google, Trading Algorithms

Professional Experience

Web Developer, Kahana Group Inc | Remote, US **Aug 2023 - Jan 2024**
- Proposed adv. features & coordinated with cross-functional teams to design & implement UI/UX utilizing React JS
- Integrated analytics tool & initiated data-driven upgrades to meet user demands: Increased User Retention rate by 4%

Software Engineer, Quantitative Brokers | Chennai, India **Jul 2022 - Jun 2023**
- Led the strategic integration of SonarQube & BlackDuck into Jenkins pipeline, reducing critical vulnerabilities by 20%
- Designed a robust VueJS Web-app, decentralized the database using ETL which improved database performance
- Engineered an internal tool to seamlessly create and transmit FIX (Financial Information Xchange) order messages
- Enhanced FIX tool by on-boarding functionalities for Multi-Leg orders which increased operational efficiency by 15%

Big Data Engineer Intern, Big Data Science Research | Bangalore, India **Apr 2020 - Jun 2020**
- Automated the data mining from Google Maps, elevating OpenStreetMap visualization using data overlay techniques
- Devised a proprietary map-matching algorithm to accurately model urban traffic flow, aiding in efficient city planning

Machine Learning Engineer Intern, Alphabt – TVS Motors Ltd | Hosur, India **May 2019 - Jun 2019**
- Implemented a program to scan vehicle labels leveraging openCV, boosting validation performance system by 3%
- Devised a custom TensorFlow-based object detection model, achieving an 99% accuracy in text engraving recognition

Projects

Machine Learning 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
- Deployed the Deep-RL framework in the FetchReach environment, resulting in a 10% increase in task success rates

NLP Engineer: Chatbot | UTD **Feb 2024 - May 2024**
- Built comprehensive knowledge base by web scraping & advanced NLP techniques enabling efficient data retrieval
- Engineered an LSTM-based model with an attention mechanism, improving response relevance and context by 25%

Machine Learning Engineer: Surface Texture Analysis | IIT Madras **Aug 2021 - May 2022**
- Systemized an approach in identifying machined surface textures with CV & ML techniques, achieved 99.6% accuracy
- Built Neural Network employing statistical features from GLCM for texture classification improving accuracy by 44%

AI Research Scientist: Optimization Algorithms | IIT Madras **Mar 2022 - May 2022**
- Assessed performance of 4 distinct Stochastic Optimization algorithms on control agents in OpenAI gym environment
- Developed & applied Gradient Descent algorithms to optimize Deep Q-Network model, attaining a 15% boost in return

Applied Research Scientist: Multi-Agent Cricket Game | IIT Madras **Feb 2022 - May 2022**
- Formulated cricket game as Markov Decision Process for optimal decision-making of actions in dynamic system
- Modeled a 2-player Monte Carlo Tree Search algorithm for better action selection which elevated match outcomes

Automation Engineer: DIC's Terrace Farming Robot | Inter-IIT TechMeet-2019 **Oct 2019 - Dec 2019**
- Designed a ROS-based autonomous agricultural robot capable of performing step-farming on challenging hilly terrains
- Integrated Kinect 360 for 3D mapping, enabling precise robot localization and navigation within the farmland

Leadership Experience

Teaching Assistant | UTD **Aug 2024 - Dec 2024**
- Coordinated with Professor for effective teaching tactics & class management by facilitating projects for 50+ students

Robotics Club Coordinator | IIT Madras **Aug 2017 - Dec 2019**
- Led a team of 5 and took end-to-end ownership to build Autonomous Ground Vehicle and Water Levitation projects

Awards and Honors

- Granted **Scholarship** for Graduate Studies by securing merit score in "Graduate Aptitude Test in Engineering" **2021**
- Awarded **Silver Prize** in "Terrace Farming Robot for Hilly areas" robotics challenge at Inter IIT Tech Meet **2019**
- Secured a place in the **Asia and Limca Book of Records** for "Most number of robots cleaning an area" **2017**