

Logan Margabandu

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EDUCATION

The University of Texas at Dallas

Dallas, TX

Master of Science in Data Science and Statistics

August 2025 – **Expected May 2027**

- Leadership: Finance Coordinator – ACM UTD, Workshops Director – FinTech UTD, Graduate Research Assistant, Capstone Advisor, Hackathon Enthusiast

The University of Texas at Dallas

Dallas, TX

Bachelor of Science in Software Engineering

Jan. 2023 – May 2025

TECHNICAL SKILLS

Languages: Python, Java, C/C++, SQL, JavaScript, TypeScript, HTML/CSS, R

Machine Learning: PyTorch, TensorFlow, Keras, NumPy, Pandas, Scikit Learn, Matplotlib, OpenCV, YoloV12

Frameworks/Cloud: React, Next.js, Vue, Angular, Flask, FastAPI, Express.js, Azure, GCP, AWS, PostgreSQL

Developer Tools: Git, Docker, OpenAI, Anthropic, Mistral, Cohere, LangChain, LlamaIndex

EXPERIENCE

High Performance Computing Software Engineer Intern

October 2025 – Present

Federal Reserve Bank of Dallas

Dallas, TX

- Research applications of deep learning and machine learning to macroeconomic models, optimizing and translating research code (Fortran, C++, etc.) for performance.
- Analyze and enhance linear and non-linear financial models used in the banking industry to improve efficiency and accuracy

Machine Learning Research Intern

May 2025 – August 2025

National Science Foundation

Dallas, TX

- Refined and continued to develop an interactive Oracle app integrating Design of Experiments techniques with LLMs, achieving more than a **90% test case response** accuracy and reducing manual validation time by **60%** compared to baseline QA workflows.
- Designed and executed **50+ structured experiments** across **7+ combinatorial testing strategies**, generating empirical insights that can lower QA costs in ML systems by up to **40%** and accelerate adoption in safety-critical industries.
- Authored a peer-reviewed IEEE conference publication as sole author, positioning the research to shape next-generation ML testing standards and improve software reliability and regulatory compliance in industry.
DOI: <https://doi.org/10.1109/QRS-C65679.2025.00021>

Software Engineer Intern

January 2025 – May 2025

Fellows Consulting Group

Dallas, TX

- Built and deployed a containerized full-stack application that reduced deployment time by **40%** and maintained **99.9% uptime**, ensuring faster go-to-market and stronger client satisfaction.
- Designed and fine-tuned a DoE Oracle LLM (Llama 3.2) that cut manual test-case validation effort by **60%**, enabling consultants to reallocate hours to higher-value client work and reduce QA overhead.
- Increased model accuracy by **35%** across **10K+ test scenarios** by integrating multiple ML frameworks, directly improving product reliability and lowering the risk of costly production defects.

PROJECTS

Nomi.ai – HackUTA 3rd Place | Node.js, Express.js, Claude 3.5 Sonnet, Gemini API, ElevenLabs

October 2025

- Engineered an AI reasoning system that interprets reports, detects biomarkers, and predicts risks, achieving 90% accuracy in symptom insights and generating actionable Doc AI recommendations.
- Designed a Digital Twin Dashboard with NFC + 3D avatar (Unity, Blender, Three.js) to visualize evolving health models in real time and share insights with doctors.
- Engineered an AI reasoning layer using Claude 3.5 and ElevenLabs to deliver natural voice interaction, real-time symptom analysis, and personalized self-care recommendations.

AVANCE Dallas Grant Finder | React, Scrapy, Selenium, FastAPI, PostgreSQL

August 2025 – Present

- Built a bilingual React + FastAPI platform to centralize grant data and streamline application tracking, accelerating the application process by **40%** and increasing on-time submissions by **25%**.
- Automated the collection of **500+ local non-federal grants** annually by developing a Python web scraping and deduplication pipeline, reducing staff research time by **90%**.