

Dami Thomas

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EDUCATION

Massachusetts Institute of Technology (MIT)

Exp. May 2026

Candidate for B.S in Artificial Intelligence and Decision Making & Minor in Mechanical Engineering

- **Relevant Coursework:** Introduction to Robotics, Robotic Manipulation, Introduction to Machine Learning, Advances in Computer Vision, Introduction to Autonomous Machines, Dynamics and Controls I & II, Design and Manufacturing

EXPERIENCE

Rockwell Automation | AI Engineer Intern

June 2025 - August 2025 | Milwaukee, WI

- Built a **RAG re-ranking pipeline** for a pharmaceutical recipe generation product with **Streamlit**, **ChromaDB**, **LangChain**, **Azure OpenAI**, and **Python**, boosting chatbot quality with an **84% user preference rate**.
- Engineered **data preprocessing pipelines** on product failure and warranty datasets using **Scikit-learn**, **NumPy**, and **Pandas** to enable **causal AI modeling** and improve reliability insights.

NASDAQ | AI Engineer Intern

January 2025 - February 2025 | Boston, MA

- Created a **Year-End Review Synthesizer** using **AWS Bedrock**, **Python**, and **LLMs**, reducing employees' evaluation data collection time from multiple days to **2 minutes**.
- Implemented **map-reduce** and **LangGraph** for parallel processing of Jira tickets, emails, and GitHub commits, enabling automated generation of data-driven performance summaries and optimized managerial review processes.

Elinta Robotics | Assembly and Design Engineer Intern

June 2023 - August 2023 | Kaunas, Lithuania

- Spearheaded the design and implementation of automated systems using **aluminum profiles**, **stainless steel components**, and **FESTO pneumatic technology** for assembling a Milk Packaging Line.
- Engineered **pneumatic-powered actuators** with integrated **computer vision algorithms** to optimize efficiency and quality control in manufacturing processes for building a PCB Tester.

NASA Lunar Autonomy Challenge | Team Member

October 2024 - May 2025 | Cambridge, MA

- **Applied SciPy interpolation** to model and estimate lunar surface elevations (**75–90% confidence**) and visualized terrain with Matplotlib heatmaps; built a **PID controller** for rover path following and boulder avoidance.
- **Achieved 2nd place nationally** among 31 U.S. university teams for autonomous rover performance.

PROJECTS

Semantic Navigation Robot

July 2025 - August 2025

- Built a **Semantic Visual Navigation Robot** with **ROS 2 Humble**, **SLAM Toolbox**, **Nav2**, **YOLOv11**, **Whisper**, and **RViz2**, leveraging the **NVIDIA R2B bag dataset** for mapping, object detection, and speech-driven navigation without simulation.
- **Designed modular ROS 2 architecture** using CycloneDDS and rosbag2 playback to integrate perception, planning, and natural language commands.

Fit Classifier

May 2025 - July 2025

- Built an end-to-end fashion recognition pipeline with **YOLOv8**, **CLIP embeddings**, and **FAISS**, deployed via **Python-Docker** on **Google Cloud** with **Firestore** for embeddings/metadata; achieved **2–3s detection speed**, **80%+ match accuracy**.
- Designed a **React frontend** with an integrated AI-powered chatbot via **Google Gemini API**, enabling photo uploads, real-time visualization, natural language queries, category classification, and product recommendations with purchase links for users.

Yu-Gi-Oh! Deck Builder

August 2024

- **Built a Yu-Gi-Oh! deck builder website** with **Node.js**, **Express.js**, and **EJS**, integrating the YuGiOhProDeck API and Axios to filter **12,000+ cards** with efficient **RESTful** data handling.

Autonomous Competition Robot

August 2023 - December 2023

- Built an **Arduino-powered robot** integrating **IMU**, **encoders**, and **line-tracking sensors**, and implemented **PID** and **Bang-Bang control** for reliable maze navigation and line following.

SKILLS

Software: TensorFlow | PyTorch | Python | Linux | MATLAB | SQL | Javascript | Arduino | Adobe Illustrator | Hugging Face
React.js | HTML | CSS | Postgres | Git | ROS2 | Numpy | Pandas | Node.js | Express.js | YOLO | Docker

Maker: SolidWorks | 3D Printing | Woodworking | CNC Lathe & Mill | Laser Cutter | Waterjet | Welding | Plasma Cutter | Drill Press