

Dermot Molony

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Education

University of Michigan

Bachelor of Science in Engineering

Ann Arbor, MI

Spring 2025

- GPA: 4.0
- Course Highlights: EECS 370 (Intro to Computer Organization), EECS 376 (Foundations of Computer Science), EECS 281 (Data Structures and Algorithms), EECS 203 (discrete math), ROB 101 (Applied Linear Algebra)

Thomas Jefferson High School for Science and Technology

Fairfax, VA

Top 3 National High School

- Course Highlights: Artificial Intelligence 1 & 2, Computer Vision 1 & 2, Web Development & App Development

Experience

State Farm

Software Engineering Intern

Bloomington, IN

May 2023-August 2023

- Sorted, filtered and displayed results from 10,000+ Knowledge Articles using NLP through AWS Kendra
- Developed and helped deploy to production integratable iFrame Smart Search Widget
- Tested and deployed through Terraform utilizing AWS S3, Route 53, CloudFront and Certificate Manager

Michigan Autonomous Aerial Vehicles

Software Engineer

Ann Arbor, MI

September 2022-Present

- Analyzing gathered lidar and camera data to control drone movement
- Identifying moving targets for real time drone docking using OpenCV
- Utilizing ROS to control simulated drone activity within Gazebo

Children's Science Center

Team Lead

Fairfax, VA

July 2020-Present

- Directed and worked on a team creating science videos for elementary schoolers
- Volunteered at the Children's Science Center lab where I helped serve over 50,000 visitors a year
- Planned STEM outreach events targeted at Title 1 schools

Projects

Othello AI

- Implemented mini-max AI algorithm using Python to solve Othello
- Optimized search pattern using alpha-beta pruning
- Generated opening book table to save initial runtime

Coin Identification

- Implemented canny edge, area fill, and circle identification with C++ to categorize up to 100 overlapping coins
- Completed original project without OpenCV functions
- Rewrote code using OpenCV functions to improve runtime and accuracy

Bike Safe and Save

- Created and simulated Gazebo bike object using ROS mouse interface
- Collected and analyzed acceleration and velocity data to generate biker safety categorizations
- Pitched idea to State Farm executives and then presented to smaller team of potential developers

Lego Classifier

- Developed TensorFlow model to identify 45 different types of Lego bricks at 90% accuracy
- Modified to TensorFlow Lite model for deployment within an Android application for on-the-go categorization
- Wrote and presented research paper discussing my project and methods along with resources used

Skills

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- Computer languages – Python, Java, C++, JavaScript, SQL, AndroidStudio, HTML, CSS, NodeJS
 - Git, AWS