

# Giang Anh Vu

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## Education

### University of Michigan

Bachelor of Science, Mechanical Engineering

Ann Arbor, MI

May 2027

### Montgomery College

Associate of Science, General Engineering, GPA: 3.7/4.0

Rockville, MD

May 2025

## Experience

### University of Michigan Magnetometer Laboratory

Ann Arbor, MI

#### Research Assistant

Aug 2025 – Present

- Develop ML models achieving 94% recall for geomagnetic storm prediction using Random Forest classifiers, enabling early warning systems for satellite infrastructure; authoring research paper.
- Analyze magnetometer data to correlate solar events with geomagnetic fluctuations; research material properties for optimal sensor selection on NASA missions.
- Calibrate and maintain Helmholtz Coil apparatus for RM3100 sensor testing.

### Mathnasium

Clarksville, MD

#### Math Instructor

May 2024 – June 2025

- Instructed K-12 students in Calculus I–III for AP exam preparation; developed personalized learning plans to improve mathematical reasoning and STEM interest.

## Leadership & Activities

### Phi Theta Kappa College Honor Society

Rockville, MD

#### Montgomery College Vice President

Aug 2024 – June 2025

- Coordinated events engaging 400+ honor society members; represented chapter at regional meetings.

### Montgomery College Student Government Association

Rockville, MD

#### Treasurer

Dec 2023 – June 2024

- Managed \$40,000 budget, overseeing financial allocations for 40+ student organizations; approved \$28,000+ in resources through bi-weekly meetings.

## Projects

### Lucentia | *TypeScript, Next.js, React, PostgreSQL*

Sep 2025 – Present

- Developed full-stack financial intelligence platform using Next.js, React, and PostgreSQL that classifies spending, detects anomalies, and reduces manual accounting time by 90%.

### UM Electric Boat | *SolidWorks, Siemens NX*

Sep 2025 – Present

- Design and manufacture world record-fastest electric boat hull optimizing efficiency and safety using SolidWorks and Siemens NX across engineering disciplines.

### AWS Powered Autonomous Robot Car | *Python, AWS, Creo Parametric*

Feb 2023 – June 2023

- Programmed reward functions in Python for autonomous navigation; designed collision-resistant outer shell using Creo Parametric.

## Skills & Interests

**Technical Skills:** Python, TypeScript, JavaScript, C++, MATLAB, Machine Learning (scikit-learn, Random Forest), PostgreSQL, Docker, Git, CAD (SolidWorks, Creo Parametric, Siemens NX), Digital Logic

**Languages:** English (Fluent), Vietnamese (Fluent), Spanish (Conversational)