# Michael Evans

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Incoming Aug 2025

2025

2023, 2019

## **EDUCATION**

**University of Pennsylvania** Master of Science in Engineering in Artificial Intelligence GPA: Incoming

**Old Dominion University** Bachelor of Science in Computer Science GPA: 3.95/4.00

Tidewater Community College

Associate of Science in Computer Science, Business Administration GPA: 3.96/4.00

## PUBLICATIONS

## **Conference Proceedings**

**M. Evans**, M. Machado, R. Johnson, L. Escamilla, A. Vadella, B. Froemming-Aldanondo, T. Rastoskueva, M. Jostes, D. Butani, R. Kaddis, C. Chung, and J. Siegel. A Roadside Unit for Infrastructure Assisted Intersection Control of Autonomous Vehicles. *IEEE International Conference on Electro/Information Technology (EIT)* 2025.

B. Froemming-Aldanondo, T. Rastoskueva, **M. Evans**, M. Machado, A. Vadella, L. Escamilla, R. Johnson, M. Jostes, D. Butani, R. Kaddis, C. Chung, and J. Siegel. Evaluating Low-Resource Lane Following Algorithms for Compute-Constrained Automated Vehicles. *IEEE International Conference on Artificial Intelligence, Robotics, and Control (AIRC)* 2025.

### Workshops

**M. Evans**, D. Soós, E. Landers, and J. Wu. MSVEC: A Multidomain Testing Dataset for Scientific Claim Verification. *National Workshop for REU Research in Networking and Systems (REUNS @ ACM MobiHoc)* 2023.

### TALKS

**A** Roadside Unit for Infrastructure Assisted Intersection Control of Autonomous Vehicles IEEE International Conference on Electro/Information Technology, Valparaiso University, 2025.

Robust Lane Following with V2X Traffic Management

Research Experience for Undergraduates, Lawrence Technological University, 2024.

The Potential of Large Language Models in Evaluating Scientific Claims Undergraduate Research Symposium, ODU Digital Commons, 2024.

MSVEC: A Multidomain Testing Dataset for Scientific Claim Verification The 8th National Workshop for REU Research in Networking and Systems, George Washington University, 2023.

Scientific News Verification With GPT

Research Experience for Undergraduates, Old Dominion University, 2023.

### **RESEARCH EXPERIENCE**

#### **Undergraduate Research Assistant**

ODU Vision Lab, advised by Dr. Khan Iftekharuddin

Sept 2024-Present

• Fine-tuned the VGG16 convolutional neural network (CNN) with PyTorch for target identification in an autonomous surveillance robot capable of identifying, tracking, and following individuals.

- Improved an existing motion-planning algorithm in MATLAB for target following through tight, cluttered environments to enable safe indoor operation previously limited to outdoor use.
- Reduced MRI scan processing times by 15 hours through parallelizing a brain volume extraction pipeline with FreeSurfer on an HPC cluster.

### NSF REU - Developing Self-Drive Algorithms for Electric Vehicles

Lawrence Tech and Michigan State University, advised by Dr. Chung and Dr. Siegel Computer Science & Artificial Intelligence Robotics Lab

- Designed an adaptive speed algorithm to reduce acceleration and braking in autonomous vehicles through intersections by up to 75.35%, minimizing fuel consumption and noise pollution.
- Created machine learning self-drive algorithms with DBSCAN, K-means, ROS, OpenCV, and Scikit-learn.
- Built a simulation using GazelleSim for autonomous intersection control testing in a controlled environment.

# **NSF REU - Disinformation Detection and Analytics**

Old Dominion University, advised by Dr. Jian Wu Lab for Applied Machine Learning and Natural Language Processing Systems

- Conducted prompt engineering and hyperparameter tuning with the OpenAI API on scientific claim verification with Python.
- Increased the size of our project corpus by over 200% to improve benchmarking the effectiveness of the GPT-3.5-turbo model's ability to generalize to multiple scientific news domains.
- Calculated the precision, recall, and F1 score on zero-shot classification with the GPT-3.5-turbo model against our dataset on two sub-tasks: stance labeling and identifying sentence rationales.

# **PROFESSIONAL EXPERIENCE**

#### Junior PHP Web Developer

Hard to Find Party Supplies

- Optimized legacy inventory processes with the use of Cron Jobs to save 30 minutes of work time per week.
- Maintained \$1m/year eCommerce platform by performing server maintenance, writing documentation, designing web page features, managing Google AD campaigns and updating inventory of 35,000 products.
- Ported XML web page modifications from PHP to TWIG during a full server rework with the MVC design pattern.

### SELECTED TECHNOLOGIES

#### **Programming Languages** Python, C++, MATLAB, PHP, JavaScript, GDScript

## Libraries & Frameworks

PyTorch, OpenCV, ROS, Scikit-learn, Pandas, NumPy, Matplotlib, React, Express

### AWARDS

NSF CISE REU Travel Grant – \$1,200	May 2025
Research Profile Highlight – Old Dominion University College of Sciences Newsletter	Nov 2024
College of Sciences Dean's List – Old Dominion University	Dec 2023-May 2025
BIO, GEO, CISE and OCE REU Travel Grant – \$1,200	Sept 2023
Academic Excellence Award – Tidewater Community College	April 2020, Mar 2023

### **SERVICE & MEMBERSHIPS**

Congressional App Challenge (CAC), Vision Lab Exhibitor	Dec 2024
Intelligent Ground Vehicle Competition (IGVC), Surveyor	Jun 2024
Institute of Electrical and Electronics Engineers (IEEE), Student Member	Jun 2024-Present
Association for Computing Machinery Group at ODU, Member	Jan 2024-Present
STEM Day Expo, Wilson High School, Volunteer Exhibitor	Mar 2019
National Mathematics Honor Society at TCC (MA $\Theta$ ), Member	Feb 2019-Present

Dec 2021-June 2022

May-July 2024

June-Aug 2023