## Michael Evans

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#### **EDUCATION**

### University of Pennsylvania

Aug 2025-Present

Master of Science in Engineering in Artificial Intelligence

**GPA:** Incoming

### **Old Dominion University**

2025

Bachelor of Science in Computer Science

GPA: 3.95/4.00

# Tidewater Community College

Associate of Science in Computer Science, Business Administration

2023, 2019

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

Sept 2024-Present

ODU Vision Lab, advised by Dr. Khan Iftekharuddin

• 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

May-July 2024

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

June-Aug 2023

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

Dec 2021-June 2022

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

Academic Excellence Award – Tidewater Community College

### Libraries & Frameworks

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

### AWARDS

NSF CISE REU Travel Grant – \$1,200 Research Profile Highlight – Old Dominion University College of Sciences Newsletter College of Sciences Dean's List – Old Dominion University BIO, GEO, CISE and OCE REU Travel Grant – \$1,200

Nov 2024 Dec 2023-May 2025 Sept 2023 April 2020, Mar 2023

May 2025

# SERVICE & MEMBERSHIPS

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

Dec 2024
Jun 2024
Jun 2024-Present
Jan 2024-Present
Mar 2019
Feb 2019-Present