

Michael Evans

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EDUCATION

Old Dominion University

M.S. in Electrical & Computer Engineering

Norfolk, VA

Anticipated May 2027

Thesis: *AI Framework for Disease-Agnostic Brain Glucose Hypometabolism Prediction*

B.S. in Computer Science

May 2025

Tidewater Community College

A.S. in Computer Science

Norfolk, VA

May 2023

PUBLICATIONS

Refereed Papers

C2. M. L. 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.

C1. B. Froemming-Aldanondo, T. Rastoskueva, M. L. 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.

W1. M. L. 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.

Preprints

P1. M. A. Witherow, M. L. Evans, A. Temtam, H. R. Okhravi, and K. M. Iftexharuddin. Machine Learning-Enhanced Non-Amnesic Alzheimer's Disease Diagnosis From MRI and Clinical Features. *arXiv* 2026.

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

Research Assistant

Sept 2024-Present

Vision Lab, advised by Dr. Khan Iftexharuddin

- Developed a FreeSurfer pipeline on an HPC cluster to extract 100,000 volumetric features in parallel from 500 patient MRI scans, enabling training of a random forest model for Alzheimer's disease classification.

- Visualized an ROI-map on an anatomically average brain template to highlight brain regions with significant features ($\alpha = 0.05$) for Alzheimer's classification with volumetric group mean z-score color coding.
- Fine-tuned the VGG16 convolutional neural network (CNN) with PyTorch for facial recognition of 4 lab members in an autonomous surveillance robot capable of identifying, tracking, and following individuals.

NSF REU Intern - 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.
- Implemented and analyzed DBSCAN and K-means machine learning self-drive algorithms for reliability.
- Built a simulation in GazelleSim for testing our autonomous intersection control in a controlled environment.

NSF REU Intern - 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

- Engineered prompts and tuned hyperparameters with the OpenAI API for scientific claim verification.
- 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 across 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 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 modifications from PHP to TWIG during a full server rework with the MVC design pattern.

SELECTED TECHNOLOGIES

Programming Languages
 Python, R, Bash, C++, MATLAB

Libraries & Frameworks
 PyTorch, OpenCV, SPM, FreeSurfer, NiBabel, Nilearn, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn

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), <i>Vision Lab Exhibitor</i>	Dec 2024
Intelligent Ground Vehicle Competition (IGVC), <i>Surveyor</i>	Jun 2024
Institute of Electrical and Electronics Engineers (IEEE), <i>Student Member</i>	Jun 2024-Present
Association for Computing Machinery (ACM) Group at ODU, <i>Member</i>	Jan 2024-Present