

Timothy Richard Winans

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EDUCATION

University of Maryland, Baltimore County (UMBC)

Baltimore, MD

Bachelor of Arts in Global Studies, Security Studies Certificate — In Progress

GPA: 3.905

- Honors College; Omicron Delta Kappa National Leadership Honor Society; Tau Sigma National Honor Society
- Focus on international affairs, governance, and science and technology policy
- Research background spanning computer science, physics, and astrophysics
- Erasmus+ (KA171) Exchange Student, Hochschule Bonn-Rhein-Sieg, Germany — Global Engineering COIL program with UMBC, H-BRS, University of Porto, and IMT (June 2026)

Howard Community College (HCC)

Columbia, MD

Physical Science and General Studies

GPA: 3.970

- Schoenbrodt Scholar
- NASA Community College Aerospace Scholars (NCAS) Alumnus; NASA L'SPACE NPWEE Alumnus

EXPERIENCE

Research Team Member (Part-Time)

2024 – Present

Center for Space Sciences and Technology, University of Maryland, Baltimore County

- Develop and maintain software pipelines that process image data, extract quantitative indicators, and aggregate results across large datasets for comparative analysis
- Contribute to machine learning research on spectral data, transforming complex measurements into structured numerical features suitable for modeling
- Emphasize careful data preparation, validation, and clear documentation to ensure reliable, reproducible results

Founder and Systems Developer

2025 – Present

Aethermark Systems LLC, Maryland

- Founded and operate a product-oriented company developing and commercializing ideas through software development and physical prototyping
- Manage iterative development, testing, and refinement with an emphasis on practical execution and technical ownership

Fall Intern (Full-Time)

September 2024 – November 2024

International Joint Commission, U.S. Department of State — Washington, DC

- Supported the operations of a bilateral organization established by treaty between the United States and Canada, assisting with research, administrative, and coordination tasks across interagency workflows
- Gained exposure to treaty-based governance, institutional decision-making, and the role of data and documentation in international policy environments

Staff Writer

June 2023 – July 2024

The HCC Times, Howard Community College

- Reported and wrote articles on campus affairs, public policy, science, and current events
- Conducted background research, interviews, and fact-checking to translate complex topics into clear, accessible analysis for a general audience

Content Strategist

January 2022 – June 2023

The HCC Times, Howard Community College

- Led non-editorial operations including staff coordination, workflow management, and audience engagement, and contributed to a website redesign that significantly expanded readership

LEADERSHIP & ACTIVITIES

Director of Programming

2025 – Present

Anne Arundel County Young Democrats

- Plan and coordinate chapter programming, including speaker events, trainings, and member engagement initiatives
- Collaborate with chapter leadership to set organizational priorities and grow member participation

Treasurer

2025 – Present

UMBC Sailing Club

- Manage club finances and budgeting, including funding requests and expenditure tracking for competitive and recreational sailing operations

President, Howard Community College Chapter

2022 – 2024

Maryland Student Legislature

- Led chapter delegation and represented HCC in mock legislative proceedings modeled on the Maryland General Assembly
- Awarded Best Senator, 2024–2025

PUBLICATIONS

Winans, T. R., Quach, J., & Reynolds, E. (2025). Spectroscopic, Photometric, and Computational Analysis of B-Type Stars in M45: Gaia DR3 Radial Velocity Discrepancies. *Journal of Research in Progress*, Volume 8. Howard Community College.

<https://pressbooks.howardcc.edu/app/uploads/sites/139/2025/10/JRIP8.pdf>