

Joel Brendan Wommack

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Education

University of Michigan, August 2025 - May 2027

Master of Science in Environment and Sustainability, Geospatial Data Sciences

The College of William and Mary, September 2021 - May 2025

Bachelor of Science in Computer Science, Minor in Data Science

- Coursework: Software Development, Data Structures, Algorithms, Discrete Mathematics, Linear Algebra, Calculus II, Advanced GIS, Database Systems, Geovisualization and Cartography, Finite Automata

Professional and Research Experience

Virginia Institute of Marine Science, May 2025 - Present

Research Programmer Specialist

Streamline data processing workflows using Python scripting with Pandas to clean, summarize, and transform incoming Survey123 records

- Develop and maintain an Esri dashboard to visualize real-time data from the National Trap Program
- Maintain coastal datasets for ecological monitoring, informing marine research and resource management

European Research Council – Urbisphere, April 2024 - August 2024

Undergraduate Research Technician exploring relations between climate change and urbanization

- Contributed to climate and urbanization research by developing an API to retrieve, format, and serve geospatial data from a remote sensing network
- Improved public access to real-time research outputs by integrating geodata into a live website built with the Tornado web framework while collaborating with an international research team

Rocky Mountain Youth Corps, May 2023 - August 2023

Conservation Corps Member

- Contributed to land management initiatives through hands-on conservation projects in collaboration with federal and state agencies
- Restored wetlands and alpine meadows through erosion control, native planting, and invasive species removal in remote public lands

Leidos, December 2022 - February 2023

Software Development Intern

- Tested and analyzed a ray tracing system with JUnit, contributed to QA in a large production codebase, and improved test coverage for core rendering components.

Relevant Volunteer Experience

William and Mary Herbarium, October 2024 - December 2024

GIS Student Tech

- Modernized campus flora records by georeferencing historical maps in ArcGIS Pro, standardizing data, and analyzing 30 years of biodiversity loss due to campus expansion.

Technical Skills

Programming Languages: Python, Java, C++, JavaScript, HTML

Other Skills: ArcGIS Pro, ArcGIS Online, Experience Builder, QGIS, Scripting, Git, Pandas, JSON, Unit Testing

References

Dr Karinna Nunez, Geospatial Modeling Manager and Senior Research Scientist, VIMS

Email: karinna@vims.edu

Matthias Zeeman, Project Manager and Developer, Universitat Freiburg (Freiburg, Germany)

Email: matthias.zeeman@meteo.uni-freiburg.de