

# Joel Brendan Wommack

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## **Education**

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**University of Michigan SEAS**, August 2025 - May 2027

Master of Science, Geospatial Data Sciences

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

Bachelor of Science, 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**

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**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**

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**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**

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

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

## **References**

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

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

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