Joel Brendan Wommack

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Education

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

University of Freiburg, Semester Abroad

- Coursework: Sustainable Energies, QGIS, Climate Resistant Cities, Climate and Ecosystems, German B1

Professional and Research Experience

Virginia Institute of Marine Science, May 2025 - Present

Geospatial Data Analyst Intern

- 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