Jaydee Edwards, PhD

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Professional Summary

Scientist and sustainability-focused analyst with experience developing data-driven sustainability strategies, tracking KPIs, and translating complex environmental information into decision-ready insights. Skilled in cross-functional collaboration, risk assessment, and supporting ESG-aligned initiatives across large, complex systems

EDUCATION

University of Pennsylvania, School of Arts and Sciences   Philadelphia, PA
Doctor of Philosophy – Earth and Environmental Science.   May 2025
Benjamin Franklin Fellow | Dr. Andy Binns Impact Award | Certification in University Teaching

John Brown University   Siloam Springs, AR
Bachelor of Science – Chemistry   May 2020
Cum Laude | Chemistry Honors | Chancellor's Scholar

WORK EXPERIENCE

Doctoral Researcher   Philadelphia, PA
University of Pennsylvania | Department of Earth and Environmental Science   July 2020 – May 2025
Led multi-year environmental research integrating field data, laboratory analysis, and large-scale modeling to support credible assessments of environmental impact in urban systems.
Analyzed complex environmental datasets in Python, documenting assumptions and uncertainty to ensure responsible interpretation and defensible claims.
Translated technical findings into clear, decision-ready narratives for non-technical stakeholders through publications, presentations, and workshops.

Data Science & Sustainability Consultant   Remote
The Headwater Group | theheadwatergroup.net   Dec 2025 - Present
Support sustainability and climate analysis for land-use and nature-based initiatives, emphasizing data quality and defensible interpretation.
Analyze environmental and geospatial datasets to inform MRV-adjacent workflows for external stakeholders.
Translate analytical outputs into clear, decision-ready summaries for non-technical audiences.

Academic and Intellectual Programming Fellow   Philadelphia, PA
University of Pennsylvania | Graduate Student Center   July 2024 – May 2025
Designed and delivered university-wide programming focused on research communication, academic writing, and community engagement for a diverse graduate population (17,000+ students).
Collaborated with cross-functional campus partners to coordinate programs, manage logistics, and strengthen stakeholder participation.

Research Mentor   Remote
Lumiere Education   2023 - Present
Mentored students through structured research projects, guiding literature review, data interpretation, and scientific writing.
Supported development of clear research questions and evidence-based conclusions, emphasizing responsible use and communication of data.

Leadership Roles – Graduate Student Government   Philadelphia, PA
University of Pennsylvania | Graduate & Professional Student Assembly   2020 - 2023
Served as Executive Vice President and Research Council Chair, supporting governance, agenda-setting, and decision-making across research-focused graduate programs.
Reviewed and allocated competitive research and travel funding, balancing equity, impact, and accountability considerations.

SKILLS

Environmental & Climate Data Analysis (Python, ArcGIS), Data Quality, Assumptions & Uncertainty Documentation, Responsible Sustainability Reporting & Claims, Stakeholder Communication & Cross-Functional Collaboration

GRANTS & FUNDING

Graduate Student Grant Recipient – Geological Society of America (multiple), International Association of GeoChemistry (Elsevier), Water Center at Penn.

SELECTED PUBLICATIONS

Vehicle Tire Particles in the Environment, United Nations Environment Programme (2024).
Morphology and mineral encrustations of density-separated tire- and road-wear particles collected in Charleston, SC., Polymer Bulletin (2025).