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EDUCATION

University of Notre Dame

August 2025 - Present

- Nuclear Forensics PhD student at Civil & Environmental Engineering and Earth Sciences, College of Engineering

University of California, Los Angeles (UCLA)

GPA: 3.6/4.0 March 2025

- B.S. in Climate Science. Concentrations: Atmospheric Oceanic Sciences, Chemistry, Data Science
- Coursework: Chemical Oceanography; Advanced Physics; Atmospheric Physics: Radiation, Clouds, and Aerosols; Atmospheric Thermodynamics; Atmospheric Chemistry and Air Pollution; Organic Chemistry; Advanced Meteorology; Multivariable Calculus; Linear Algebra; Differential Equations, MATLAB

Kingsborough Community College

GPA: 3.95/4.0 June 2022

- Associate's in science, Chemistry concentration

PUBLICATIONS

Wu, J., and Abbott, D. (2024). Cosmic Dust in Sediments from The Hudson River: Using Horizons Enriched in Extraterrestrial Sn As Regional Stratigraphic Markers. *Report of the Tibor T. Polgar Fellowship Program, 2023*, Hudson River Foundation.

Wu, J. (2022). Mental Illness and Mass Shootings: A Quantitative Treatment of Risk Factors and Mitigation Strategies. *Advances in Social Science, Education and Humanities Research*. <https://doi.org/10.2991/assehr.k.220110.191>

WORK EXPERIENCE

Researcher

Research Mentor

Lamont-Doherty Earth Observatory of Columbia University

2022-2025

- *Undergraduate Researcher* in geochemistry working with Dr. Dallas Abbott. Sampled and analyzed marine sediment cores, focusing on submarine volcanic eruption impacts and geochemical proxies, such as oxygen isotopes in foraminifera. Reconstruct past climate and environmental conditions over three projects, using geochemistry, programming, and laboratory skills.
- *Research Mentor* tutoring research interns, developing laboratory instrument knowledge and hands-on skills.

College Assistant Tutor

Kingsborough Community College

Spring 2022

- Tutored classmates with Calculus and Linear Algebra for 20 hours a week at Kingsborough Learning Center.

RESEARCH PROJECTS AND CONFERENCES

- **AGU 2024** Wu, J., Abbott, H.D., Bostick, B. (2024) *Impact of Volcanic Eruptions on Submarine Biological Productivity in the Bismarck Sea: Insights from Black Foraminifera*. Submarine to Emergent Volcanism: Advances in Observations, Methods, and Surveying II Poster.
- **AGU 2023** Wu, J., and Abbott, H.D. (2023). *Cosmic Dust in Sediments from The Hudson River: Using Horizons Enriched in Extraterrestrial Sn as Regional Stratigraphic Markers*. Planetary rings, meteoroid and dust populations and effects.
- **AGU 2022 and ASLO 2023** Wu, J., and Abbott, H.D. (2022). *Will the Next Global Crisis Be Produced by a Large Volcanic Eruption? Constraining the Source Volcanoes for 6th Century Eruptions*. Submarine Volcanism: Advances in Observations, Methods, and Models.
- **Behavioral and Cognitive Neuroscience: Human Psychopathology (Summer 2021)**. Investigated the relationship between gun violence and mental illness using Python libraries and visualization packages under Professor Robin Murthy from the University of Oxford.

AWARDS AND FELLOWSHIPS

- **Dean's Fellowship, University of Notre Dame:** Selected as one of six recipients, awarded to the top 0.1% of over 7,500 applicants
- **Jack Kent Cooke Graduate Scholarship:** Awarded up to \$150,000 to support graduate study
- **2023 Tibor T. Polgar Fellow:** Selected as one of seven recipients funded by the Hudson River Foundation to conduct scientific research
- **Jack Kent Cooke Undergraduate Transfer Scholar:** Awarded a full-ride scholarship with an acceptance rate of less than 3%
- **The Chemistry Award:** Awarded for demonstrating outstanding achievement in the study of chemistry at Kingsborough

SKILLS

- Python, R, MATLAB, C++. Data processing and analysis using NumPy, Pandas, and Matplotlib.
- Scientific Skills: Using Scanning Electron Microscopes (SEM), X-ray fluorescence spectrometry (XRF), X-Ray diffraction analysis (XRD), isodynamic separator, Itrax core scanner, synchrotron machine, and magnetic susceptibility meter. Doing Loss of Ignition (LOI) test and sampling sediment cores.