

VU ANH LE

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EDUCATION

Beloit College

Beloit, WI

Bachelor of Science, Mathematics. Grade: 4.0/4.0

Relevant Coursework: Introduction to Proofs, Calculus I/II, Discrete Mathematics, Linear Algebra, Mathematical Statistics, Differential Equations, Complex Analysis, Mathematics Colloquium, Object-oriented Programming, Data Structures and Algorithms, University Physics I/II, General Chemistry, Human Biology, Anatomy, Histology and Pathology, Introduction to Political Thinking, Sustainable Cities, International Political Economy & Environment

Massachusetts Institute of Technology

Cambridge, MA

Summer Research Program - General. Grade: In progress

Relevant Coursework: Data Science Machine Learning Course (DSML - SOP), Responsible and Ethical Conduct of Research Certificate (RECR)

AWARDS & HONORS

Presidential Scholarship, Beloit College, Awards 42,000 USD annually

Aug 2021 - May 2025

Board of Trustees Grant, Beloit College, Awards 10,000 USD annually

Aug 2021 - May 2025

Dean's list, Beloit College

Every semester

MIT Summer Research Program, Massachusetts Institute of Technology

June 2024

Semi Finalist, InSPiR2eS Global Pitching Research Competition 2023 (IGPRC 2023)

Jan 2024

Station1 Frontiers Fellowship, Massachusetts Institute of Technology, Awards 13,500 USD

June 2023

National Research Grant, Vietnam's Ministry of Finance, Awards 10,000 USD

Jan 2023

Friends of UTokyo Scholarship, The University of Tokyo, Awards 4,000 USD

Jun 2022

PROFESSIONAL EXPERIENCE

Massachusetts Institute of Technology

Cambridge, MA

Incoming Intern, Summer Research Program - General

June 2024 - Aug 2024

- Engage in the program's events and advising.
- Contribute to the ALTEMIS project co-led by Dr. Haruko Wainwright. Expected to utilize established PyLEnM package in monitoring local watershed.

Massachusetts Institute of Technology

Remote

Research Assistant, Department of Civil and Environmental Engineering

Aug 2023 - Present

- *Research Advisor:* Dr. Haruko Wainwright.
- Derived indicator features from water samples at a Department of Energy-owned Superfund site around Savannah River National Laboratory, focusing on isotopes Iodine-129 and Strontium-90 across 200+ wells.
- Primarily used the Pylemn package for curating the original dataset, plotting trends of analyte concentrations, extrapolating 50+ years regression, building a data frame table for results, and visualizing the progress of radioactive waste treatments across different wells in real-time maps using NASA satellite imagery.
- Employed the Random forest regression through the scikit-learn library to identify the variables influencing the decrease of contaminant concentrations. The results were later applied for supervision services with the local and South Carolina state legislature.

Vietnam's Ministry of Natural Resources and Environment
Research Assistant and Compliance Reporter, Remote Sensing Department

Hanoi, Vietnam
April 2020 - Present

- *Research Advisor:* Dr. Le Quoc Hung.
- Established image networks, executed interferometric processing, and formulated models for primary and secondary inverse displacement to generate maps. The acquired maps were then validated with coefficient indices. The tools used include Python and QGIS with the Geopandas library.
- Compiled reports for submission to the Vietnamese legislature, specifically to the Committee on Science, Technology, and Environment of the Vietnamese National Assembly, and to local authorities, focusing on land deformation and the impact of corporate environmental compliance and regulations.

Massachusetts Institute of Technology
Summer Fellow, Station1 Frontiers Fellowship

Remote
June 2023 - Aug 2023

- Participated in Station 1 Frontiers Fellowship, a summer program involving a socially-directed research design curriculum taught by instructors at the MIT Department of Materials Science and Engineering.
- Utilized the ReciPe model to quantify the carbon intensity of biodegradable materials' life cycle using Python and supporting libraries Brightway2. Found that per ton of bioplastics unit recycled from renewable natural gas yields a decrease of 4.75 kg in carbon emissions compared to PVC.
- Collaborated with the project's industrial partner, Corumat Inc., in collecting data related to carbon emissions.

CAMPUS ENGAGEMENT & LEADERSHIP

Legal Initiatives of Vietnam
Paralegal Assistant

Remote
Aug 2021 - Present

- Conduct legal research on the current political strategies and policies implemented by Vietnamese authorities.
- Publish opinions on critical political issues via the affiliated newspaper "Luat Khoa Tap Chi".

Beloit Math and CS Club
Co-founder and President

Beloit, WI
Aug 2021 - Present

- Connected students to faculty and influencers in the Math and Computer Science field.
- Updated students on field-related opportunities such as research projects, internships, and employment.
- Set preparatory sessions for undergraduate competitions like the Mathematical Contest in Modeling and Putnam.

Beloit College
Division III Athlete, Cross Country Team

Beloit, WI
Aug 2021 - Present

PUBLICATIONS

1. Vu, Thi Phuong Thao, Dang, Truong Giang, and Le, Vu Anh. "Reliability Assessment of Land Subsidence Monitoring Results Using PSI Technique in Ho Chi Minh City, Vietnam." *International Journal of Environmental Studies* 81, no. 2 (March 3, 2024): 881–95. [\[Manuscript URL\]](#)
2. Vu, Thi Phuong Thao, Le, Vu Anh, and Kalibbala, Martin. "Estimating the impact of climate change on flood-flow patterns into the Ban Chat Reservoir, Northern Vietnam." *Under peer-review*. [\[Manuscript URL\]](#)
3. Le, Vu Anh, Zoro, David, Waggoner, Mike, and Ortiz, Christine. "Life Cycle Assessment of Biodegradable Plastic Packaging Subject to Comprehensive Organic Sorting." *Article manuscript in progress*. [\[Manuscript URL\]](#)

SKILLS & INTERESTS

Interests: Computational modeling, automation of scientific discovery, environmental governance

Programming and Software: Python, MATLAB, R, QGIS, PostgreSQL, PostGIS.

Libraries and Frameworks: (Python)NumPy, SciPy, Matplotlib, TensorFlow/PyTorch, Pandas, SimPy, geopandas, shapely, Fiona, SEABORN, rasterio, Brighthway2, PyLEnM, sscikit-learn, folium.

Others: Cross country, Track and field, Kendo, Hiking, Culinary arts.