VU ANH LE

Box 1091, Beloit College Mail Center, 700 College Street • Beloit, Wisconsin 53511 • leav@beloit.edu
[Personal Website] • **[LinkedIn]** • **[ORCID]**

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

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*

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]**

PROESSIONAL 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 Nuclear Science and 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 random forest regression o identify variables influencing the decrease in contaminant concentrations. Utilized a combined CNN-LSTM model with the attention mechanism to perform near-term forecasting on the effects of well features on the decrease in contaminant levels.

Vietnam's Ministry of Natural Resources and Environment Hanoi, Vietnam
Research Assistant and Compliance Reporter, Remote Sensing Department *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 Remote
Summer Fellow, Station1 Frontiers Fellowship *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 Remote
Paralegal Assistant *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 Beloit, WI
Co-founder and President *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 Beloit, WI
Division III Athlete, Cross Country Team *Aug 2021 - Present*

SKILLS & INTERESTS

Interests: Computational modeling, automation of scientific discovery, environmental governance
Programming and Software: Python, MATLAB, R, LaTeX, QGIS, PostgreSQL, PostGIS.
Libraries and Frameworks: (Python)NumPy, SciPy, Matplotlib, TensorFlow/PyTorch, Pandas, SimPy, geopandas, shapely, Fiona, SEABORN, rasterio, Brigthway2, PyLEnM, sscikit-learn, folium.