Nexus S. Attiogbe

Worcester, MA | (508) 847-9549 | nattiogbe@umass.edu | https://www.linkedin.com/in/nexi-attiogbe/

EDUCATION

University of Massachusetts Amherst | Amherst, MA — Anticipated May 2027
Bachelor of Science in Chemical Engineering, Member of Commonwealth Honors College
RISE Scholars Program (Fall 2023 Cohort), Dean's List

SKILLS & INTERESTS

Technical: Python, MATLAB, R, GAMS, Arduino (C++ Programming), Energy System Modeling, Optimization, Data Visualization
Languages: Spanish (Intermediate)
Interests: Cooking, Swimming, F1, Travel, Video Editing

WORK EXPERIENCE

Undergraduate Research Assistant
Energy, Environment, and Economic-Decision Making Lab (E3 Lab) | Amherst, MA — August 2023 – Present

- Optimize extraction, pre-processing, and analysis of energy economy modeling data using Python
- Collaborate in the evaluation of robust net-zero carbon electricity generation portfolios in terms of cost and emissions through data visualization
- Implement high-performance computing and data visualization to contribute to the evaluation of the disparity in the scale of impacts of power plant emissions on different socioeconomic groups across the continental United States

Visiting Summer Undergraduate Research Assistant
Society, Policy, Infrastructure, Climate and Energy (SPICE) Group | Pittsburg, PA — May 2024 – August 2024

- Helped to develop supercomputer code that built upon existing modelling to more accurately depict how the effect of extreme temperature events on households varies by income by looking at 30,000 households in the Mid-Atlantic
- Implemented an optimization algorithm that made model fitting approximately 100 times faster per household than our previous model fitting method

Decarbonization Modeling & Policy Analysis Student Engineer
Electric Power Research Institute (EPRI) | Remote — November 2023 – May 2024

- Conducted topic modeling and sentiment analysis on public comments related to power sector emissions regulations
- Designed a retrieval augmented generation (RAG) large language model (LLM) Flask web app to offer insights into environmental regulation compliance strategies to state agencies and utilities

PUBLICATIONS

- Baker, E., Bistline, J.B., & Attiogbe, N. (Submitted July 2024). *Robust Pathway Analysis of Electricity Investments Under Net-Zero Uncertainties*. Submitted to **Energy and Climate Change**

PRESENTATIONS

Unveiling Hidden Energy Poverty: Assessing the Impact of Extreme Temperature Events on Energy Equity
13th Naval Academy Science and Engineering Conference | Annapolis, MD — November 2024

- Presented results from an analysis of 30,000 households in the Mid-Atlantic to determine how the effect of extreme temperature events on households varies by income based on

Robust Pathway Analysis of Electricity Investments Under Net-Zero Uncertainties
2024 Macro Energy Systems Workshop | Princeton, NJ — June 2024
2024 Energy Transition Symposium | Amherst, MA — March 2024

- Presented a framework that can be used to extract robust investment insights into electricity generation technology under a set of criteria and a goal of net-zero from disagreeing energy economy models

PERSONAL PROJECT(S)

Supercharging Sustainability (Python) [Notebook: https://www.kaggle.com/code/nosmax/supercharging-sustainability/]

- Designed a simulation to model a city's transition towards sustainable power generation aided by an energy storage system that reduces fossil fuel reliance by 40%
- Utilized Prophet from Facebook to predict energy consumption patterns
- Implemented Proximal Policy Optimization (PPO) reinforcement learning algorithm for power flow optimization