

Joseph Abi-Karam

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Education

University of Illinois Urbana Champaign
Bachelor in Environmental Engineering
Minor in Atmospheric Sciences

August 2021 - May 2025
GPA: 3.72/4.00 (Grainger Engineering James Scholar)

Relevant coursework: Introduction to Computer Science, Systems Engineering & Economics, Engineering Risk & Uncertainty, Engineering Graphics & Design, Energy and Global Environment, Water Resources Engineering

Relevant Experience

CDDS (Climate Dynamics and Data Science) Research Group, UIUC

January 2022 - Present

Climate / Renewable Energy Researcher

- Converting energy-relevant climate data into actionable energy supply values using Python
- Conducting statistical analysis on historical weather data to assess the complementarity of wind and solar power integration

Urban Climate AI Lab, UIUC

June 2023 - Present

CEE (Civil and Environmental Engineering) REU (Research Experiences for Undergraduates) Intern

- Investigating urban climate-energy sensitivity using CLMU 3D Data analysis (Community Land Model Urban)
- Producing plots illustrating the relationship between urban temperature and AC / heating consumption on extreme heat/cold days using different metrics
- Conducting literature review on the urban biophysical feedback and the different metrics to identify extreme heat/cold days

Teacher Assistant (T.A.), UIUC

August 2023 - Present

Teacher Assistant for ATMS 140- Climate and Global Change

- Attending lectures and taking notes
- Grading student homework and entering the grades in the grade book in a timely manner
- Communicating with students in the course via email and online discussion boards
- Holding one office hours per week to answer student questions

Activities and Leadership

Engineers Without Borders, UIUC Chapter

August 2021 - Present

Project Lead, Hopkins Park Wastewater Treatment Plant Rehabilitation Project

December 2021 - August 2023

- Leading a team of 15 students in developing plans to rehabilitate a wastewater treatment plant in Hopkins Park, IL
- Presided over the research process to evaluate the efficacy of existing designs and consider alternative systems and technologies for pipes and valves and the lift station ahead of a re-assessment trip to the village in October 2022
- Coordinating with multiple stakeholders including the local community leaders, non-governmental organizations and field experts to facilitate progress of the project

Skills

Computer Languages and Applications: Python, R, Revit, Microsoft Excel & Suite

Non-technical skills: Project Leadership, Social Media Management

Languages: French (native), English (fluent), Arabic (fluent)