

EDUCATION

University of Massachusetts Amherst, Amherst, MA
Manning College of Information and Computer Sciences
Ph.D. in Computer Science

Expected: May 2028

University of Massachusetts Amherst, Amherst, MA
College of Engineering
B.S. in Computer Engineering
Departmental Honors in Computer Systems Engineering

Sep. 2018-May 2022

GPA: 3.97, *Summa Cum Laude*

RESEARCH INTERESTS

Distributed and Operating Systems, Sustainability, Decarbonization in Computing, and Data Analysis

RESEARCH EXPERIENCE

Quantifying the Benefits of Carbon-Aware Temporal and Spatial Workload Shifting in the Cloud *In Submission*
<https://arxiv.org/abs/2306.06502>

Conduct data analysis on carbon intensity dataset from 123 regions worldwide to quantify the upper bounds of carbon savings from carbon-aware spatiotemporal workload shifting in the cloud for ideal and practical settings.

Poster: Spatiotemporal Carbon-aware Scheduling in the Cloud: Limits and Benefits *e-Energy'23*

Present the upper bounds of carbon savings from carbon-aware spatiotemporal workload shifting in the cloud from 123 regions globally.

On The Sustainability and Cost Trade-offs for Cloud Customers and Providers *In Submission*

Examine the cost and performance penalties incurred from the transitions from cost- and performance-aware operations to carbon-aware operations from customer and provider perspectives.

How the Choice of Carbon Intensity Signal Shapes Carbon-Aware Scheduling Outcomes

Conduct data analysis on the average and marginal carbon intensity signals from 68 regions worldwide to understand how the signals' characteristics affect the carbon-aware scheduling decisions.

GreenVM: A Zero-Carbon Service

Analyze the availability of the excess, unreliable green energy from different electric grids globally to determine the potential to utilize this stranded energy for zero carbon services.

TEACHING EXPERIENCE

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| • Introduction to Python | Fall 2023 |
| • Mobile Health Sensing | Spring 2023 |
| • Computer Systems Principles | Spring 2022 |

VOLUNTEER EXPERIENCE

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| • UMass Undergrad Research Volunteers Program, Mentor | Winter 2023 |
| • UMass Computer Science Turing Summer Program, Teaching Instructor | Summer 2023 |
| • UMass Summer Engineering Institute Graduate, Mentor | Summer 2022 |

GRADUATE COURSEWORK

Distributed and Operating Systems, Advanced Algorithms, Neural Networks