Thanathorn Sukprasert

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Education

University of Massachusetts Amherst. Ph.D. in Computer Science May 2022 –
Advisors: Prashant Shenoy and David Irwin

University of Massachusetts Amherst. B.S. in Computer Engineering Sep 2018 – May 2022
Departmental Honors in Computer Systems Engineering GPA: 3.97, *Summa Cum Laude*

Research Interest

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

Research Experience

Research Intern, Dolby Laboratories Jun – Sep 2024
Developing a network protocol for resource-intensive media while maintaining a high-quality experience

Graduate Research Assistant, University of Massachusetts Amherst May 2022 – Present
Focusing on the sustainability aspect of cloud and edge computing to reduce carbon footprint

Publications and Academic Works

T. Sukprasert, A. Souza, N. Bashir, D. Irwin, and P. Shenoy. 2024. On the Limitations of Carbon-Aware Temporal and Spatial Workload Shifting in the Cloud. In Proceedings of the Nineteenth European Conference on Computer Systems (EuroSys'24).

T. Sukprasert, N. Bashir, A. Souza, D. Irwin, and P. Shenoy 2024. On the Implications of Choosing Average versus Marginal Carbon Intensity Signals on Carbon-aware Optimizations. In Proceedings of the 15th ACM International Conference on Future and Sustainable Energy Systems (e-Energy'24).

T. Sukprasert, A. Souza, N. Bashir, D. Irwin, and P. Shenoy. 2024. On the Limitations of Carbon-Aware Temporal and Spatial Workload Shifting in the Cloud. Poster Abstract. (EuroSys'24).

T. Sukprasert, A. Souza, N. Bashir, D. Irwin, and P. Shenoy. 2023. Spatiotemporal Carbon-aware Scheduling in the Cloud: Limits and Benefits. In Companion Proceedings of the 14th ACM International Conference on Future Energy Systems. Poster Abstract. (e-Energy'23 Companion).

T. Sukprasert. How the Choice of Carbon Signal Impacts Carbon-Aware Scheduling Decisions. Workshop paper. (EuroDW'24)

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

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. *(In Progress).*

Academic Experience

Teaching Assistant, University of Massachusetts Amherst
Distributed and Operating Systems, Introduction to Python, Mobile Health Sensing, Computer Systems Principle

Podcast Guest, Disseminate: The Computer Science Research Podcast
Podcast Title: Move Your Workloads To Sweden!

Undergraduate Research Mentor, University of Massachusetts Amherst
Undergraduate Research Volunteer (URV) Program Summer 2024, Winter 2023
Computer Science Turing Summer Program Summer 2023
Summer Engineering Institute Graduate Summer 2022

Relevant Coursework

Distributed and Operating Systems, Advanced Algorithms, Neural Networks, Database Design and Implementation