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 Interests

Cloud and Edge Computing, Computer Systems, Decarbonization in Computing, Optimizing User Experience

Research 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.
Currently implementing a reliable web service that operates entirely on unreliable renewable energy sources.

Research Intern, Dolby Laboratories Jun – Sep 2024
Measured motion-to-photon latency in ALVR and analyzed the impacts of packet drops on VR streaming latency.

Publications and Academic Works

T. Sukprasert et al. 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 et al. 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). Best Notes Paper Runner-Up.

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

T. Sukprasert et al. On the Limitations of Carbon-Aware Temporal and Spatial Workload Shifting in the Cloud. Poster Abstract. (EuroSys'24).

T. Sukprasert et al. 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).

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

Zero-carbon Web Service
Implementing a reliable web service that depends solely on intermittent renewable energy sources. *(In Progress).*

Motion-to-Photon Latency Measurement Study (Collaboration with Dolby Laboratories)
Analyzing the effects of network traffic and performance issues on motion-to-photon latency. *(In Progress).*

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!

CICS Undergraduate Research Volunteer (URV) Program, Mentor Summer 2024, Winter 2023

Computer Science Turing Summer Program, Mentor and Instructor Summer 2023

Summer Engineering Institute, Mentor and Instructor Summer 2022

Incoming PhD Support Program, Peer Mentor Fall 2024

Relevant Coursework

Distributed and Operating Systems, Advanced Algorithms, Neural Networks, Database, Performance Evaluation