Michal Shlapentokh-Rothman

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Research Interests

Efficient adaptation of vision and language tools for downstream tasks.
Keywords: vision-language, transfer learning, multi-modal, foundation models, large language models

Education

University of Illinois at Urbana-Champaign — Urbana, IL
PhD Candidate in Computer Science — *Aug. 2020- Aug. 2025 (Expected)*
Advisors: Derek Hoiem, Yuxiong Wang

Massachusetts Institute of Technology — Cambridge, MA
Masters of Engineering in Computer Science and Electrical Engineering — *Sept 2019 - May 2020*
Thesis Title: Unifying Threat Data with Public Knowledge

Massachusetts Institute of Technology — Cambridge, MA
Bachelor of Science in Computer Science and Engineering — *Sept 2015 - May 2019*
Research Advisors: Erik Hemberg, Una-May O'Reilly

Research Experience

University of Illinois at Urbana-Champaign — Urbana, IL
Graduate Researcher — *Fall 2020-Present*
Combining foundation models for more efficient and effective learning

Amazon — Virtual
Applied Science Intern, Manager: Greg Hager, Mentor: Mohsen Malmir — *May 2022- Aug 2022*
Category discovery with unlabeled data

Amazon — Virtual
Applied Science Intern, Manager: Greg Hager, Mentor: Ejaz Ahmed — *May 2021 - Aug 2021*
Transfer learning with limited labels

Publications and Preprints

[1] **M. Shlapentokh-Rothman***, A. Blume*, Y. Xiao, Y. Wu, S. TV, H. Tao, J. Y. Lee, W. Torres, Y.-X. Wang, and D. Hoiem, "Region-based representations revisited," in *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.

[2] H. Tao, S. TV, **M. Shlapentokh-Rothman**, H. Ji, and D. Hoiem, "Webwise: Web interface control and sequential exploration with large language models," in *NAACL*, 2024.

[3] A. Zhou, K. Yan, **M. Shlapentokh-Rothman**, H. Wang, and Y.-X. Wang, "Language agent tree search unifies reasoning acting and planning in language models," in *International Conference on Machine Learning (ICML)*, 2024.

[4] D. Hoiem, T. Gupta, Z. Li, and **M. Shlapentokh-Rothman**, "Learning curves for analysis of deep networks," in *Proceedings of the 38th International Conference on Machine Learning (ICML)*, 2021.

Service

Reviewer, CVPR (2022, 2023), NeurIPS (2023), ICLR (2023), ICML (2024) — 2022-Present
UIUC Vision Cluster, Student Administrator — 2022-Present
UIUC Vision Mini-Conference, Co-Organizer — April 2023