

Yonatan Slutzky

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Research Interests

Deep Learning, Learning Theory, State Space Models, Learning for Control

Education

Tel Aviv University, Ph.D. (Direct Track), School of Computer Science & AI 2023 – Present

- Advisor: Professor Nadav Cohen
- Topic: Theoretical and algorithmic foundations of deep learning
- Current GPA: 98/100

Tel Aviv University, B.Sc. in Computer Science, Statistics and Operations Research 2020 – 2023

- GPA: 95/100

Research Experience

Institute for Mathematical and Statistical Innovation (IMSI), Visiting Researcher, March 2026 – June 2026
Long Program on Theoretical Advances in Reinforcement Learning and Control (incoming)

Honors and Awards

- Princeton Machine Learning Theory Summer School (2024, 1/80 Ph.D. students selected from 500+ worldwide)
- Direct Ph.D. excellence program, Tel Aviv University Center for AI and Data Science (TAD)
- Summa cum laude graduate of Tel Aviv University B.Sc. Statistics and Operations Research (2023)
- Magna cum laude graduate of Tel Aviv University B.Sc. Computer Science (2023)
- Tel Aviv University Faculty of Exact Sciences Dean's honors list (2021, 2023)
- Tel Aviv University School of Mathematical Sciences Award for outstanding undergraduate achievements (2023)
- "First Steps in Research for Outstanding Students" program, School of Computer Science & AI

Publications

Conference Proceedings

- Yotam Alexander[†], Yonatan Slutzky, Yuval Ran-Milo and Nadav Cohen. 'Do Neural Networks Need Gradient Descent to Generalize? A Theoretical Study'. *Conference on Neural Information Processing Systems (NeurIPS) 2025*
- Yonatan Slutzky[†], Yotam Alexander[†], Noam Razin and Nadav Cohen. 'The Implicit Bias of Structured State Space Models Can Be Poisoned with Clean Labels'. *Conference on Neural Information Processing Systems (NeurIPS) 2025, Spotlight Track (top 3%)*
- Nir Endy[†], Idan Daniel Grosbard[†], Yuval Ran-Milo[†], Yonatan Slutzky[†], Itay Tshuva, Raja Giryes. 'Mamba Knockout for Unraveling Factual Information Flow'. *Association for Computational Linguistics (ACL), 2025, SAC Highlight Track (top 2%)*

[†]Equal Contribution

Teaching

- Teaching assistant, Intro to Machine Learning, School of Computer Science & AI, Tel Aviv University (2025–present)
- Teaching assistant, Workshop on Deep Learning, School of Computer Science & AI, Tel Aviv University (2024–present)
- Teaching assistant, Foundations of Deep Learning, School of Computer Science & AI, Tel Aviv University (2024–present)
- Teaching assistant, Statistical Learning, School of Mathematical Sciences, Tel Aviv University (2023)

Service

Reviewer

- *Journal of Machine Learning Research (JMLR)*

Talks

- *Reichmann University AI-NLP Seminar, Herzliya, Israel, 2025*
- *ELLIS Deep Models and Optimization Group Seminar, Tübingen, Germany, 2025*
- *LMU Mathematical Data Science and Artificial Intelligence Group Seminar, Munich, Germany, 2025*