

Jonathan Kahana

<https://pages.cs.huji.ac.il/jonkahana> | jonathan.kahana@mail.huji.ac.il

Summary

Final year PhD candidate in Computer Science with specialization in Machine Learning. Currently conducting research on weight space learning, with a focus on developing probing techniques for analyzing model weights.

Previously completed 5 years of service in the Israeli Defense Forces: 2 years in the elite Talpiot program followed by 3 years as an applied research data scientist in the Israeli Air Force.

Education

The Hebrew University of Jerusalem

- PhD candidate in Computer Science (advisor: by Prof. Yedid Hoshen) 2022-2026 (anticipated)
- MSc in Computer Science (advisor: by Prof. Yedid Hoshen) 2021-2022
- B.S in Computer Science and Physics 2015-2019

Publications

- *Discovering Hidden Gems in Model Repositories* (under submission)
Jonathan Kahana, Eliahu Horwitz, and Yedid Hoshen
https://jonkahana.github.io/hidden_gems
- *Can this Model Also Recognize Dogs? Zero-Shot Model Search from Weights* (under submission)
Jonathan Kahana, Or Nathan, Eliahu Horwitz, and Yedid Hoshen
<https://jonkahana.github.io/probelog/>
- *Charting and Navigating Hugging Face's Model Atlas* NeurIPS 2025 – Position Track
Eliahu Horwitz, Nitzan Kurer, **Jonathan Kahana**, Liel Amar, and Yedid Hoshen
<https://horwitz.ai/model-atlas>
- *Representing Model Weights with Language using Tree Experts* CVPR 2025
Eliahu Horwitz*, Bar Cavia*, **Jonathan Kahana***, and Yedid Hoshen
<https://horwitz.ai/probex/>
- *Deep Linear Probe Generators for Weight Space Learning* ICLR 2025
Jonathan Kahana, Eliahu Horwitz, Imri Shuval, and Yedid Hoshen
<https://vision.huji.ac.il/probegen/>
- *Recovering the pre-fine-tuning weights of generative models* ICML 2024
Eliahu Horwitz, **Jonathan Kahana**, and Yedid Hoshen
https://horwitz.ai/spectral_detuning
- *Dataset Size Recovery from Fine-Tuned Model Weights* ICLR 2025 WSL Workshop

Mohammad Salama, **Jonathan Kahana**, Eliahu Horwitz, and Yedid Hoshen

<https://openreview.net/attachment?id=eSdxkSNbfZ&name=pdf>

- *Improving zero-shot models with label distribution priors*

Jonathan Kahana, Niv Cohen, and Yedid Hoshen

<https://arxiv.org/pdf/2212.00784.pdf>

- *Red PANDA: Disambiguating Anomaly Detection by Removing Nuisance Factors* ICLR 2023

Niv Cohen, **Jonathan Kahana**, Yedid Hoshen

<https://arxiv.org/pdf/2207.03478.pdf>

- *A Contrastive Objective for Learning Disentangled Representations* ECCV 2022

Jonathan Kahana, Yedid Hoshen

<https://arxiv.org/pdf/2203.11284.pdf>

Work Experience

Applied Research and Data Science

2017-2020

Israeli Air Force

- Lead researcher of a critical time-series classification project
 - Exploratory data analysis, training ML algorithms, coordinating project goals with product manager, shipping finalized model to production
- Object detection in videos (tracking objects from aerial videos)
 - Exploratory data analysis, training object detection CNNs from scratch
- Several other projects in the fields of time-series forecasting and clustering

Teaching Experience

The Hebrew University of Jerusalem

- Teaching assistant in the course "Advanced Course in Machine Learning" 2022-2025
 - Designed the course exercises
 - Supported student forums and handled personal requests
 - Managed graders assignments
- Teaching assistant in the course "Machine Learning Methods" 2022-2025
 - Designed and graded the courses exercises and exams
 - A year after, the course merged with "Introduction to Machine Learning" to become an integral part of the CS mandatory program

Other Accomplishments

- Awarded the Israel Council for Higher Education Scholarship for Outstanding PhD Students in Artificial in 2025 (Intelligence and Data Science - VATAT)
- Served as a reviewer in top tier conferences including: ICLR, CVPR, ICCV, ICML and NeurIPS
- Coordinating the Hebrew University Vision Seminar
- Took 3rd place in a machine learning hackathon ("DataHack") in Jerusalem, as part of my IAF team
- Arranged a Data-Science Hackathon for military organizations in Israel, collaborating with the "Or Yarok" association for road safety