Yoav Gur-Arieh

MS Student and software engineer with 9 years of experience, researching interpretability in LLMs

Q Tel-Aviv, Israel
 □ yoavgurarieh@gmail.com

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Education

Tel-Aviv University

Oct 2024 to Jun 2025

MS in Computer Science

- NLP lab, researching interpretability in LLMs under advisor Mor Geva.
- Done as part of the direct-to-masters interdisciplinary program.
- Average: 96.44

Tel-Aviv University

Oct 2022 to Jun 2026

Interdisciplinary Studies

- Studying in the Adi Lautman Interdisciplinary Program for Outstanding Students.
- Took courses in computer science, biology, neuroscience, physics and history.
- Average: 93.71

Experience

Graduate Researcher (Advisor: Mor Geva)

Sep 2024 to present

Tel-Aviv University

- Working on research in interpretability and control in LLMs
- Published research on improvements to large-scale automated feature interpretability pipelines, generating output-centric feature descriptions to improve understanding of features.
- Researching novel scalable **knowledge adaptation** and injection techniques for LLMs.
- Working on building large-scale data pipelines for precise knowledge attribution for pre-training.

Research Intern (Supervisor: Atticus Geiger)

Jun to Sep 2025

 $Pr(Ai)^2R$ Group

Senior Software Engineer

Mar 2021 to present

Laminar Security / Rubrik

- Joined the startup at its inception, spearheading the development of front-end, back-end, and agent-based systems from scratch, including a document sensitivity classification engine.
- Led technical research and implemented solutions for extracting decrypted data from encrypted cloud traffic.

Senior Developer & Researcher

Mar 2016 to Mar 2021

Stealth

- Carried out months-long solo research projects into esoteric and opaque technologies that have little or no publicly available documentation, culminating in the development of technical solutions.
- Led through to completion highly complex, high-risk projects involving multiple teams.

Software Developer

Aug 2015 to Mar 2016

Checkpoint Software Technologies

 Contributed to the development of a log aggregator and analyzer product tailored for large enterprises. Designed and implemented automated reports featuring visualization of insights.

Publications

LMEnt: A Suite for Analyzing Knowledge in Language Models from Pretraining Data to Representations

September 2025

Daniela Gottesman, Alon Gilae-Dotan, Ido Cohen, Yoav Gur-Arieh, Marius Mosbach Ori Yoran, Mor Geva

Submitted to TACL - https://arxiv.org/abs/2509.03405

Precise In-Parameter Concept Erasure in Large Language Models

May 2025

Yoav Gur-Arieh, Clara Suslik, Yihuai Hong, Fazl Barez, Mor Geva

Accepted to EMNLP Main 2025 - arxiv.org/abs/2505.22586

Enhancing Automated Interpretability with Output-Centric Feature Descriptions

Jan 2025

Yoav Gur-Arieh, Roy Mayan, Chen Agassy, Atticus Geiger, Mor Geva

Accepted to ACL Main 2025 - arxiv.org/abs/2501.08319

Invited Talks

Max Planck Institute for Security and Privacy – From Description to Erasure: Feature-Based Control of LLMs

Sep 2025

Projects

SAE Knowledge Erasure Project

Code $m{m{C}}$

Leveraged output-centric feature descriptions to identify MLP SAE features associated with specific concepts in the Gemma-2 2B model. Ablated these features to effectively erase the corresponding concepts, demonstrating targeted knowledge manipulation - explained in detail here.

Avian Neuronal Response Project

Code \square

Analyzed avian neuronal activity in response to varied bird calls (authentic and artificial), and used classical
machine learning techniques to classify stimuli.

Parkalot - Parking Finder App

Link 🗹

- Developed an app that displays parking lots with free spots around the user.
- o Created the scraper (python), backend (python), database (SQL) and app (JS).

Hoppa - Platform Jumper Android Game

 $Link \ \Box$

• Developed an android platform jumper game using Unity in C#, from conception to deployment.

Technologies

Languages: Python, C, Golang, C#, Java, JavaScript

Technologies: PyTorch, HF Transformers, TransformerLens, SAELens, eBPF, Linux Internals, Cybersecurity

Language Proficiency

English, Hebrew: Native