

Eshed Margalit, PhD

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I am an AI scientist focused on understanding and interfacing with biological systems. I develop novel neural network architectures and apply them to complex spatial data in vision and biology. In my PhD, I developed neural networks that predict the structure, function, and development of the brain's visual system. I've also worked as the founding Principal AI Scientist at a stealth research startup building flexible and queryable self-supervised learning systems.

Experience

NOETIK, Inc.

Vice President, AI Research

- Leading a team of exceptional scientists in the execution of Noetik's AI research agenda 2026 - Present

Director, Machine Learning Research

- Led training and analysis of TARIO-2, a multimodal model trained to predict spatial transcriptomics from H&E images 2026
- Oversaw application of internal foundation models to predict response to drug treatment from pre-treatment clinical samples
- Created internal tools integrating visualization of model inference with agentic AI co-scientists

Principal Machine Learning Scientist

- Promoted twice, to Senior then Principal, in under 1.5 years 2023 - 2025
- Designed and wrote from scratch a flexible, scalable ML framework for distributed model training with PyTorch, Ray, and a custom train loop that underlies all ML work at Noetik
- Developed OCTO, OCTO-vc, and TARIO, a family of novel and proprietary multimodal models trained on large-scale patient data. Applied these models to generate insights into patient stratification and target discovery
- Led AI interpretability work, including the design and training of hierarchical and counterfactual sparse autoencoders (SAEs)

Principal AI Scientist, Stealth AI Startup

- Founding engineer; developed experimental self-supervised ML systems alongside full-stack web applications for interfacing with trained models. 2023

Researcher, Stanford University

- Published 16 papers and preprints in computational neuroscience and machine learning, cited by 900+. Presented at leading conferences while working with profs. Dan Yamins, Kalanit Grill-Spector, and Irving Biederman 2016 - 2023

Lead Research Scientist, ANC Group LLC

- Sole developer of a scalable, cost-effective solution for tracking passengers in airports using a custom ML processing pipeline. Includes face detection, OCR, design and detection of custom 3D-printed barcodes in CT scans, real-time dashboards, and ML-based timeseries clustering 2019 - 2023
- Ran dev-ops, orchestrated cloud resources, recruited and supervised ML/stats interns, generated reports for Department of Homeland Security, secured funding

Education

PhD in Neurosciences

Stanford University

Dissertation: A Unified Model of the Structure and Function of Primate Visual Cortex

BS in Computational Neuroscience

University of Southern California

Minor: Computer Science

Skills and Awards

- PyTorch, Lightning, Ray, AWS, Sagemaker, W&B, TensorFlow, OpenCV, Scikit-Learn, R, Typescript/React
- Co-author of NVIDIA Best Paper in NeuroAI Award, SVRHM @ NeurIPS 2022
- Grew personal habit-tracker into open-source website where 300+ users share their notes on academic papers. Personally reviewed 200+ papers in neuroscience and ML (1/wk for 4 years)
- Highest GPA in USC c/o 2016, 2x USC Best Neuroscience Student, NSF GRFP Winner