

DAWN FINZI

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EDUCATION	<p>Stanford University 2017–Present Ph.D. in Psychology (Neuroscience area), Minor in Computer Science - <i>GPA: 4.1</i> Stanford Graduate Fellow in Science and Engineering Mind, Brain, Computation and Technology Trainee</p> <p>University of Oxford 2014–2015 M.Sc. in Psychological Research (Cognitive Neurology Research Group) - <i>Distinction</i> <i>Oldfield Prize for Best Overall Performance</i></p> <p>Dartmouth College 2010–2014 B.A. in Psychology, Minors in French and Ethics - <i>GPA: 3.85/4.00</i> <i>Phi Beta Kappa, William Brewster Nickerson 1964 Psychology Prize, Phillips Family Award in Ethics, Neukom Scholar Research Award</i></p>
EXPERIENCE	<p>PhD Candidate at Stanford University, 2017–Present <i>Departments of Psychology & Computer Science</i> Member of the Stanford Vision & Perception Neuroscience Lab (PI: Kalanit Grill-Spector) and the Stanford Neuro AI Lab (PI: Dan Yamins) Investigating the neural and computational underpinnings of human visual perception. Using deep learning models (supervised & unsupervised) to understand why the visual system is organized the way it is and what we need to build into models in order to provide a better match to the brain.</p> <p>AI Resident at X, the Moonshot Factory (formerly Google X), 2021 <i>Early Pipeline Investigations</i> Worked on two confidential early-stage machine learning (ML) moonshots, one at the intersection of neuroscience and AI and one in machine translation. Used reservoir computing to integrate connectome information into ML models. Implemented structural attention mechanisms in large language models. Awarded bonus from head of early pipeline for exceptional performance during residency.</p> <p>Staff Research Associate at the University of California, San Diego, 2015–2017 <i>Cognitive Neuroscience Laboratory</i> Designed, conducted, and analyzed research on the role of neural action stopping mechanisms in task-switching; training suppression through real-time motor physiological feedback in children with Tourette’s Syndrome (collaboration with Cincinnati Children’s Hospital).</p>
TECHNICAL SKILLS	Experienced user of Python (including common libraries e.g. Pytorch, Tensorflow, Keras, scikit-learn, scipy, numpy, matplotlib), MATLAB, and R. Some knowledge of JavaScript, C++.
SELECTED PUBLICATIONS	<p>[1] Finzi, D., Margalit, E., Kay, K.*, Yamins, D.L.K.*, & Grill-Spector, K.* (2022). Topographic DCNNs trained on a single self-supervised task capture the functional organization of cortex into visual processing streams. <i>Shared Visual Representations in Human and Machine Intelligence (SVRHM) Workshop @ NeurIPS</i>. Oral; NVIDIA Best Paper in NeuroAI Award.</p> <p>[2] Finzi, D., Yamins, D.L.K., Kay, K., & Grill-Spector, K. (2022). Do deep convolutional neural networks accurately model representations beyond the ventral stream? <i>Conference on Cognitive Computational Neuroscience</i>.</p> <p>[3] Finzi, D., Gomez, J., Nordt, M., Rezai, A. A., Poltoratski, S., & Grill-Spector, K. (2021). Differential spatial computations in ventral and lateral face-selective regions are scaffolded by structural connections. <i>Nature Communications</i>, 12(1), 1-14.</p> <p>[4] Poltoratski, S., Kay, K., Finzi, D., & Grill-Spector, K. (2021) Holistic face recognition is an emergent phenomenon of spatial processing in face-selective regions. <i>Nature Communications</i>, 12(1), 1-13.</p>