MICHELE WINTER

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EDUCATION

University of California, Berkeley, Berkeley, CA — August 2018 - Present
Ph.D., Vision Science
Selected Courses: Signals and Systems, Neural Computation
Awards: Society for Neuroscience Trainee Professional Development Award, National Eye Institute Early Career Scientist Travel Award, Elsevier/Vision Research Travel Award, NSF GRFP Honorable Mention, 4th Place in UW Neural Data Challenge

Brown University, Providence, RI — May 2018
Sc.B., Computational Neuroscience
Honors Thesis: Comparative Analysis of CNNs and DoG Filters to Model Mouse Visual Cortex
Awards: QuestBridge Finalist, Champlin Foundations Scholarship

TECHNICAL SKILLS

- Programming Languages & Libraries: PyTorch, Theano, Keras, Tensorflow, Psytoolkit, Python, MATLAB
- Statistical Methods: Dimensionality reduction, regression methods, neural networks
- Areas of Expertise: Visual neuroscience, deep learning, large-scale systems and compute infrastructure, large-scale data management, scalable GPU compute

RESEARCH EXPERIENCE

Gallant Lab, *Graduate Researcher*, UC Berkeley — Jan 2019 - Present
Advisor: Dr. Jack L. Gallant
Topic: Investigating intermediate visual neuron receptive field properties using a biologically plausible neural network architecture.

Yu Lab, *Rotating Graduate Researcher,* UC Berkeley — Aug 2018 - Dec 2018
Advisor: Dr. Stella Yu
Topic: Data-driven analysis of mid-level perceptual cues for figure-ground segmentation with unsupervised learning.

Serre Lab, *Undergraduate Researcher,* Brown University — Dec 2015 - May 2018
Advisor: Dr. Thomas Serre
Topic: Neural network model prediction performance on mouse calcium imaging data in response to natural stimuli.

Computational Perception & Cognition Lab, *Undergraduate Researcher*, CSAIL/MIT — Summer 2016 & 2017
Advisor: Dr. Aude Oliva
Topic: A large, naturalistic, auditory dataset for investigating semantic representations in cortex with fMRI and MEG.

SELECTED PUBLICATIONS AND PRESENTATIONS

- **Winter, M.**, la Tour, T. D., Eickenberg, M., Oliver, M., & Gallant, J. (2022). Long-term recordings from area V4 neurons and an accurately-predicting deep convolutional energy model reveal spatial, chromatic and temporal tuning properties under naturalistic conditions. *Journal of Vision*, *22*(14), 4363-4363.
- **Winter, M.**, Eickenberg, M., Oliver, M., & Gallant, J. L. (2020). Comparison of generic convolutional networks versus biologically inspired networks as models of V4 neurons. *Journal of Vision*, *20*(11), 461-461.

TEACHING EXPERIENCE

Visual Perception Sensitivity, *Graduate Student Instructor (GSI),* Berkeley, CA — Fall 2018 & 2019

Pre-Collegiate Summer Program in Perception & Vision Science, *GSI,* Berkeley, CA — July - Aug 2019

Computational Vision, *Undergraduate Teaching Assistant*, Providence, RI — Fall 2016

LEADERSHIP EXPERIENCE

QuestBridge Alumni Mentorship, *Mentor,* Virtual — Jan - Aug 2023

Vision Science Grad Student Government, *VP of Finance (19-20), President (20-21),* Berkeley, CA — Nov 2019 - 2021

Bay Area Vision Research Day (BAVRD) Conference, *Lead Organizer*, Berkeley, CA — Sept 2018 - Sept 2019