

Reuben Feinman

Center for Neural Science, New York University
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EDUCATION

New York University, New York, NY

Sep 2017 – Present

Ph.D., Neural Science

- Advisor: Brenden M. Lake
- Focus: Computation, perception & learning

Brown University, Providence, RI

Sep 2011 – May 2015

Sc.B. with Honors, Applied Mathematics

- Honors thesis: A Deep Belief Network Approach to Learning Depth from Optical Flow
- Thesis advisors: Thomas Serre & Stuart Geman
- GPA: 3.9 / 4.0

HONORS & AWARDS

Google PhD Fellowship in Computational Neuroscience, Google

Sep 2018

Fellowships awarded annually to ~30 PhD students studying CS and related disciplines.

Henry Mitchell McCracken Fellowship, NYU GSAS

Sep 2017

Fellowships awarded annually to promising first-year PhD students in the GSAS.

CTO Recognition Award, Symantec Corporation

May 2016

Awarded by CTO Steve Trilling for significant contributions to the company's technologies.

Sigma Xi Honor Society, Brown Chapter Sigma Xi

May 2015

Awarded for strong academics and research achievement in applied science.

PUBLICATIONS & PATENTS

PUBLICATIONS

Feinman, R. and Lake, B.M. (2019). Learning a smooth kernel regularizer for convolutional neural networks. In *Proceedings of the 41st Annual Conference of the Cognitive Science Society*.

Feinman, R. and Lake, B.M. (2018). Learning inductive biases with simple neural networks. In *Proceedings of the 40th Annual Conference of the Cognitive Science Society*.

PREPRINTS

Feinman, R. and Lake, B.M. (2020). Generating new concepts with hybrid neuro-symbolic models. *arXiv preprint arXiv:2003.08978*.

Feinman, R. and Parthasarathy, N. (2020). A Linear Systems Theory of Normalizing Flows. *arXiv preprint arXiv:1907.06496*.

Feinman, R., Curtin, R.R., Shintre, S., and Gardner, A.B. (2017). Detecting adversarial samples from artifacts. *arXiv preprint arXiv:1703.00410*.

Papernot, N., Goodfellow, I., Sheatsley, R., Feinman, R., and McDaniel, P. (2016). Cleverhans v1.0.0: an adversarial machine learning library. *arXiv preprint arXiv:1610.00768*.

PATENTS

Shintre, S. and Feinman, R. (2020). Providing Adversarial Perturbations to Media. *US Patent No. 10,542,034*.

Feinman, R., Echauz, J., and Gardner, A.B. (2019). Systems and methods for trichotomous malware classification. *US Patent No. 10,366,233*.

Feinman, R. and Parikh, J. (2018). Systems and methods for detecting malware. *US Patent No. 10,133,865*.

WORK EXPERIENCE

Symantec Corporation, Mountain View, CA

Jul 2015 – Jun 2017

Machine Learning Engineer, Center for Advanced Machine Learning

- Worked in a team of 10 PhDs while consulting regularly with Ruslan Salakhutdinov.
- Led an R&D effort that improved the detection rates of both known and unknown malicious software on 100+ million endpoints worldwide.
- Developed a machine learning model that helped prevent 22 million attempts of the global and infamous “WannaCry” ransomware attack.

RESEARCH TALKS

Learning a Smooth Kernel Regularizer for CNNs, NYU CCS lab meeting

Feb 2019

Learning Inductive Biases with Neural Networks, NYU CILVR lab meeting

Feb 2018

	Artifacts of Adversarial Examples , NYU LCV meeting	Nov 2017
PRESS COVERAGE	Security Week , Symantec Adds Machine Learning to Endpoint Security Lineup eWeek , Symantec Adds Deep Learning to Anti-Malware Tools to Detect Zero-Days	Sep 2016 Jan 2016
SKILLS	Python, Jupyter, TensorFlow, PyTorch, Pyro, Docker, Git, MATLAB, \LaTeX , Java, C	
INTERESTS	Running, skiing, scuba diving, tennis, fishing, music production	
REFERENCES	<i>Mentors and colleagues who have written recommendations for me:</i> Dr. Brenden Lake , Assistant Professor of Psychology and Data Science, New York University Dr. Thomas Serre , Associate Professor of Cognitive Linguistic & Psych. Sciences, Brown University Dr. Stuart Geman , James Manning Professor of Applied Mathematics, Brown University Dr. Andrew Gardner , Senior Technical Director of Machine Learning, Symantec Corporation Dr. Nikolaos Vasiloglou , Technical Director of Machine Learning, Symantec Corporation	