## **Reuben Feinman**

Center for Neural Science, New York University 4 Washington Pl, Room 809, New York, NY 10003 reuben.feinman@nyu.edu • http://www.cns.nyu.edu/~reuben

#### **EDUCATION** New York University, New York, NY

Sep 2017 – Present

Ph.D., Neural Science

- Advisors: Brenden M. Lake & Eero P. Simoncelli
- 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

2018 - 2020

Awarded annually to ~30 outstanding PhD students around the world.

## Henry Mitchell McCracken Fellowship, NYU GSAS

2017 - 2018

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 promising research achievement in a field of applied science.

## PUBLICATIONS & PATENTS

## **PREPRINTS**

R. Feinman and B.M. Lake. Learning inductive biases with simple neural networks. *arXiv preprint arXiv:1802.02745*, 2018.

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

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

## PATENTS

R. Feinman, J. Echauz, and A.B. Gardner (2016). Systems and methods for trichotomous malware classification. *US Patent App. No.* 15/356,526.

R. Feinman, A.B. Gardner, J. Parikh (2016). Efficient feature selection. US Patent App. No. 15/282,645.

R. Feinman and J. Parikh (2016). Systems and methods for detecting malware based on event dependencies. *US Patent App. No. 15/188*,950.

### RESEARCH TALKS

# **Learning Inductive Biases with Neural Networks,** NYU CILVR lab meeting **Artifacts of Adversarial Examples,** NYU LCV meeting

Feb 2018 Nov 2017

### WORK EXPERIENCE

#### Symantec Corporation, Mountain View, CA

Jul 2015 – Jun 2017

Machine Learning Engineer, Center for Advanced Machine Learning

- Worked as the only non-PhD in a team of 10, with the consulting of ML pioneer Ruslan Salakhutdinov.
- Led an R&D effort that resulted in the dramatic improvement of known and unknown malware detection rates on 100+ million endpoints worldwide.
- Developed a ML model that caught and blocked 22 million attempts of the global and infamous "WannaCry" ransomware attack.

## PRESS COVERAGE

**Security Week**, Symantec Adds Machine Learning to Endpoint Security Lineup **Sep** 2016 **eWeek**, Symantec Adds Deep Learning to Anti-Malware Tools to Detect Zero-Days

Jan 2016

SKILLS Python, Jupyter, TensorFlow, PyTorch, Pyro, Docker, Git, MATLAB, LATEX, Java, C

**INTERESTS** Running, skiing, scuba diving, tennis, fishing, music production

## REFERENCES

Mentors and colleagues who have written recommendations for me:

**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