

DAVE EPSTEIN

(347) 832-8524

603 W. 115th St. #171, New York, NY 10025

dave.epstein@berkeley.edu

Education

University of California, Berkeley, Ph.D. in Computer Science
Advisor: Prof. Alexei Efros

Berkeley, CA
Starting Aug 2020

Columbia University, B.S. in Computer Science
Advisor: Prof. Carl Vondrick, GPA: 4.11, summa cum laude

New York, NY
Sep 2016 - May 2020

Research Interests

I work on teaching machines a high-level creative understanding of the dynamic real world, which I believe requires learning from video without manual supervision. I am also interested in language, machine learning, graphics, and interaction as they relate to this.

Publications

D. Surís*, D. Epstein*, H. Ji, S.F. Chang, C. Vondrick. “Learning to Learn Words from Visual Scenes.” Arxiv. In submission.

D. Epstein, B. Chen, C. Vondrick. “Oops! Predicting Unintentional Action in Video.” CVPR 2020.

D. Epstein*, Y. Shi*, E. Wu, C. Vondrick. “What’s missing from self-supervised representation learning?” In preparation.

D. She, K. Pei, D. Epstein, J. Yang, B. Ray, S. Jana. “NEUZZ: efficient fuzzing with neural program learning.” S&P Oakland 2019.

Experience

Google Research, advised by Dr. Chen Sun, Prof. Jiajun Wu, and Dr. Cordelia Schmid **May 2020 - Aug 2020**
Research Intern
Mountain View, CA
Worked on problems in self-supervised computer vision and natural language.

Computer Vision Lab at Columbia University, advised by Prof. Carl Vondrick **Sep 2018 - May 2020**
Worked on various problems in self-supervised learning: image and video representation learning, understanding and correcting unintentional actions in video, learning language from in-the-wild video.

Intel, Performance Projection Group **May 2018 - Aug 2018**
Software Architecture Intern
Santa Clara, CA
Modeled performance of emerging machine learning workloads on competitor hardware, analyzed CPU optimization of recurrent neural networks.

Security Lab at Columbia University, advised by Prof. Suman Jana **Oct 2017 - May 2018**
Analyzed adversarially robust networks; used neural networks to automatically find bugs in software.

Teaching Experience

Columbia University Computer Science
Head Teaching Assistant

Sep 2017 - Aug 2019
New York, NY

Data Structures and Algorithms, Fall 2017, Spring 2018, Fall 2018, Spring 2019, Summer 2019
Managed team of TAs, helped write homeworks and exams, held recitations and lectures.

Advanced Computer Vision, Spring 2019
Helped design course, evaluated presentations, mentored groups in research projects.

Awards and Honors

Theodore R. Bashkow Award (for computer science research), Columbia University **May 2020**

CRA Outstanding Undergraduate Researcher, Honorable Mention **Dec 2019**

Junior Tau Beta Pi **Mar 2019**

Professional Service

Reviewer, CVPR 2020, NeurIPS 2020

Presentations

Short presentation, Minds vs. Machines Workshop at CVPR 2020 **Jun 2020**
“Oops! Predicting Unintentional Action in Video.”

Oral presentation, Minds vs. Machines Workshop at CVPR 2020 **Jun 2020**
“Learning to Learn Words from Visual Scenes.”

Invited talk, Columbia High School Academic Program for Engineers **Nov 2018**
“AI safety and security in machine learning.”

Poster presentation, MIT Undergraduate Research Technology Conference **Oct 2018**
“Automatically detecting software vulnerabilities with machine learning.”

Other Interests

Industrial and interior design, Bay Area sports (go Giants!), indie rock and modern jazz, cooking, cocktail mixing.