Dave Epstein

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Education

University of California, Berkeley, *Ph.D. in Computer Science* — Berkeley, CA
Advisor: Prof. Alexei Efros, GPA: 4.00 — **8/2020 - 5/2024**

Columbia University, *B.S. in Computer Science* — New York, NY
Advisor: Prof. Carl Vondrick, GPA: 4.11, summa cum laude — **9/2016 - 5/2020**

Research Interests

My research is in unsupervised deep learning, with a focus on scalable, algorithmically interpretable generative architectures and objectives. I'm currently working on emergent structure and control in large models.

Publications

D. Epstein, B. Poole, B. Mildenhall, A. Efros, A. Holynski. "Disentangled 3D Scene Generation with Layout Learning." ArXiv, in submission.

D. Epstein, A. Jabri, B. Poole, A. Efros, A. Holynski. "Diffusion Self-Guidance for Controllable Image Generation." NeurIPS 2023.

D. Epstein, T. Park, R. Zhang, E. Shechtman, A. Efros. "BlobGAN: Spatially Disentangled Scene Representations." ECCV 2022.

D. Surís, **D. Epstein**, C. Vondrick. "Globetrotter: Unsupervised Multilingual Translation from Visual Alignment." CVPR 2022 (oral).

D. Epstein, J. Wu, C. Schmid, C. Sun. "Learning Temporal Dynamics from Cycles in Narrated Video." ICCV 2021.

D. Epstein, C. Vondrick. "Learning Goals from Failure." CVPR 2021.

D. Surís*, **D. Epstein***, H. Ji, S.F. Chang, C. Vondrick. "Learning to Learn Words from Visual Scenes." ECCV 2020.

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

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

Experience

Berkeley Artificial Intelligence Research, with Alexei A. Efros — **8/2020 - 5/2024**
Graduate Student Researcher — Berkeley, CA

Google Research, with Ben Poole and Aleksander Holynski — **10/2022 - 3/2024**
Student Researcher — San Francisco, CA

Adobe Research, with Taesung Park and Richard Zhang — **6/2021 - 9/2022**
Research Intern — San Francisco, CA

Google Research, with Chen Sun, Jiajun Wu, and Cordelia Schmid — **5/2020 - 12/2020**
Research Intern — Mountain View, CA

Computer Vision Lab at Columbia University, with Carl Vondrick — **9/2018 - 5/2020**
Undergraduate Research Assistant — New York, NY

Awards and Honors

Paul and Daisy Soros Fellowship **4/2022**

Theodore R. Bashkow Award (for undergraduate research), Columbia **5/2020**

Russell C. Mills Award (for undergraduate coursework), nominated, Columbia

Andrew P. Kosoresow Award (for undergraduate teaching), nominated, Columbia

CRA Outstanding Undergraduate Researcher, honorable mention **12/2019**

Junior Tau Beta Pi, Columbia **3/2019**

Teaching Experience

Columbia University Department of Computer Science **9/2017 - 8/2019**
Head Teaching Assistant New York, NY

Data Structures and Algorithms, Fall 2017, Spring 2018, Fall 2018, Spring 2019, Summer 2019

Advanced Computer Vision, Spring 2019

Professional Service

Reviewer, CVPR 2020, NeurIPS 2020, CVPR 2021, CVPR 2022, ECCV 2022