

## Education

- **Massachusetts Institute of Technology (MIT):** GPA - 5.0/5.0 Cambridge, MA  
*Candidate for Ph.D. in Computer Science* 2019 - ?
- **Massachusetts Institute of Technology (MIT):** GPA - 5.0/5.0 Cambridge, MA  
*M.Eng. in Computer Science* 2018 - 2019
- **Massachusetts Institute of Technology (MIT):** GPA - 5.0/5.0 Cambridge, MA  
*B.Sc. in Computer Science* 2015 - 2019  
– *Selected coursework:* 18.657 High Dimensional Probability, 6.854 Advanced Algorithms, 9.520 Statistical Learning Theory, 6.252 Nonlinear Optimization, 18.408 The Algorithmic Toolkit, 6.853 Algorithmic Game Theory, 18.102 Functional Analysis

## Work Experience and Research

- **Madry Lab, MIT CSAIL** Cambridge, MA  
*SuperUROP* Sept 2017 - June 2018  
– Research on designing adversarially robust deep learning models
- **Two Sigma** New York, NY  
*Quantitative Research Intern* Summer 2018  
– Worked towards understanding the fundamentals of deep reinforcement learning
- **Google Brain** Mountain View, CA  
*Research Intern* Summer 2017  
– Used style transfer based domain adaptation to improve semantic segmentation methods
- **Gifford Lab, MIT CSAIL** Cambridge, MA  
*UROP* June 2014 - Spring 2017  
– Research on modelling transcription factor binding with machine learning
- **Apple** Cupertino, CA  
*Software Engineering Intern* Summer 2016  
– Developed cross-device database synchronization system for iOS in Objective-C and C++

## Publications (\* denotes equal contribution)

1. Andrew Ilyas\*, Sam Park\* **Logan Engstrom\***, Guillaume LeClerc, and Aleksander Madry. Datamodels: Predicting predictions from training data. *ICML*, 2022
2. Hadi Salman\*, Andrew Ilyas\*, **Logan Engstrom\***, Sai Vemprala, Aleksander Madry, and Ashish Kapoor. Unadversarial examples: Designing objects for robust vision. *NeurIPS*, 2021
3. Kai Xiao, **Logan Engstrom**, Andrew Ilyas, and Aleksander Madry. Noise or signal: The role of image backgrounds in object recognition. *ICLR*, 2021
4. Hadi Salman\*, Andrew Ilyas\*, **Logan Engstrom\***, Ashish Kapoor, and Aleksander Madry. Do adversarially robust imagenet models transfer better? *NeurIPS Oral Presentation*, 2020
5. **Logan Engstrom\***, Andrew Ilyas\*, Shibani Santurkar, Dimitris Tsipras, Jacob Steinhardt, and Aleksander Madry. Identifying statistical bias in dataset replication. *ICML*, 2020
6. Dimitris Tsipras\*, Shibani Santurkar\*, **Logan Engstrom**, Andrew Ilyas, and Aleksander Madry. From imagenet to image classification: Contextualizing progress on benchmarks. *ICML*, 2020

7. **Logan Engstrom\***, Andrew Ilyas\*, Shibani Santurkar, Dimitris Tsipras, Firdaus Janoos, Larry Rudolph, and Aleksander Madry. Implementation matters in deep rl: A case study on ppo and trpo. In *International Conference on Learning Representations **Oral Presentation***, 2019
8. Andrew Ilyas\*, **Logan Engstrom\***, Shibani Santurkar, Dimitris Tsipras, Firdaus Janoos, Larry Rudolph, and Aleksander Madry. A closer look at deep policy gradients. In *International Conference on Learning Representations **Oral Presentation***, 2019
9. Andrew Ilyas\*, Shibani Santurkar\*, Dimitris Tsipras\*, **Logan Engstrom\***, Brandon Tran, and Aleksander Madry. Adversarial examples are not bugs, they are features. *NeurIPS **Spotlight Presentation***, 2019
10. Shibani Santurkar\*, Dimitris Tsipras\*, Brandon Tran\*, Andrew Ilyas\*, **Logan Engstrom\***, and Aleksander Madry. Image synthesis with a single (robust) classifier. *NeurIPS*, 2019
11. Dimitris Tsipras\*, Shibani Santurkar\*, **Logan Engstrom\***, Alexander Turner, and Aleksander Madry. Robustness may be at odds with accuracy. *ICLR*, 2019
12. Andrew Ilyas\*, **Logan Engstrom\***, Ludwig Schmidt, and Aleksander Madry. Prior convictions: Black-box adversarial attacks with bandits and priors. *ICLR*, 2019
13. **Logan Engstrom\***, Brandon Tran\*, Dimitris Tsipras\*, Ludwig Schmidt, and Aleksander Madry. Exploring the landscape of spatial robustness. *ICML*, 2019
14. **Logan Engstrom\***, Andrew Ilyas\*, and Anish Athalye\*. Evaluating and understanding the robustness of adversarial logit pairing. *NeurIPS Machine Learning and Computer Security Workshop*, 2018
15. Andrew Ilyas\*, **Logan Engstrom\***, Ludwig Schmidt, and Aleksander Madry. Prior convictions: Black-box adversarial attacks with bandits and priors. *ICLR*, 2019
16. Andrew Ilyas\*, **Logan Engstrom\***, Anish Athalye\*, and Jessy Lin\*. Query-efficient black-box adversarial examples. *ICML*, 2018
17. Daniel Kang, Richard Sherwood, Amira Barkal, Tatsunori Hashimoto, **Logan Engstrom**, and David Gifford. Dnase-capture reveals differential transcription factor binding modalities. *PloS one*, 2017

### Preprints (\* denotes equal contribution)

1. Guillaume Leclerc\*, Hadi Salman\*, Andrew Ilyas\*, Sai Vemprala, **Logan Engstrom**, Vibhav Vineet, Kai Xiao, Pengchuan Zhang, Shibani Santurkar, Greg Yang, Ashish Kapoor, and Aleksander Madry. 3db: A framework for debugging computer vision models. 2021
2. **Logan Engstrom\***, Andrew Ilyas\*, Shibani Santurkar\*, Dimitris Tsipras\*, Brandon Tran\*, and Aleksander Madry. Adversarial robustness as a prior for learned representations. 2019

### Awards

- **Google PhD Fellowship** *Awardee* 2021
- **Matlab PhD Fellowship** *Awardee* 2020
- **NSF Graduate Research Fellowship Program** *Awardee* 2019
- **Siebel Scholarship** *Awardee* 2019
- **Morris Joseph Leven Award for best Masters Thesis** *Winner* 2019
- **AI Grant** (<https://aigrant.org/>) *Grant Winner* 2017
- **Andreessen Horowitz Battle of the Hacks** *First Place* 2016
- **Greylock Hackfest** *First Place* 2016
- **WildHacks (Northwestern's Collegiate Hackathon)** *Grand Prize* 2015, 2016
- **YHack (Yale's Collegiate Hackathon)** *Top 8, Facebook Prize* 2015, 2016

## Selected Projects

- **FFCV: Fast Forward Computer Vision (2,000+ GitHub stars)** PyTorch, Python  
*10x faster model training for free* 2022  
 – Train models 10x faster without any hardware or learning algorithm changes
- **TensorFire** (AI Grant Spring 2017 winner) TensorFlow, Python, JavaScript  
*In-browser, flaming-fast, gpu-accelerated deep learning* 2017  
 – 1000x faster web-based deep learning models than previous approaches
- **ConvNet for Fast Style Transfer** (6,000+ GitHub stars) TensorFlow, Python  
*Add styles from famous paintings to any photo in a fraction of a second* 2016  
 – Deep convolutional neural network for high quality perceptual style transfer
- **Sistine** (First Place at Greylock Hackfest) Python/OpenCV  
*Install a touch screen on any laptop with only a \$1 mirror and built-in webcam* 2016  
 – Used computer vision to create a touch screen using the screen reflection onto a webcam
- **Hextris** (1,000+ GitHub Stars) JavaScript  
*More than 5,000,000 downloads - Free and open-source iOS/Android game* 2014 - 2015

## Personal Interests

- **HackMIT and Blueprint Organizing Team** 2015-2017  
 – Organized HackMIT's largest hackathon for 3 years  
 – Organized Blueprint, MIT's high school hackathon
- **Baker Executive Committee** *Freshman Representative* 2015-2016
- **Student Information Processing Board (SIPB)** *Member* 2016-present
- **Baker Intramural Dodgeball Team** *Won MIT Division B IM league* 2016
- **Simmons Intramural Soccer Team** *Won MIT Division C IM league* 2016