

## Education

- **Massachusetts Institute of Technology (MIT):** GPA - 5.0/5.0 Cambridge, MA  
*Candidate for 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
- **Massachusetts Institute of Technology (MIT):** GPA - 5.0/5.0 Cambridge, MA  
*Candidate for M.Eng. in Computer Science* 2018 - 2019

## Work Experience and Research

- **Madry Lab, MIT CSAIL** Cambridge, MA  
*SuperUROP* Sept 2017 - Present
  - 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. Anish Athalye\*, **Logan Engstrom\***, Andrew Ilyas\*, and Kevin Kwok. Synthesizing robust adversarial examples. *ICML 2018, Demo at NeurIPS 2017 Machine Learning and Computer Security Workshop*.
2. Dimitris Tsipras\*, Shibani Santurkar\*, **Logan Engstrom\***, Alexander Turner, and Aleksander Madry. Robustness may be at odds with accuracy. *ICLR 2019*.
3. Andrew Ilyas\*, **Logan Engstrom\***, Ludwig Schmidt, and Aleksander Madry. Prior convictions: Black-box adversarial attacks with bandits and priors. *ICLR 2019*.
4. Andrew Ilyas\*, **Logan Engstrom\***, Anish Athalye\*, and Jessy Lin\*. Query-efficient black-box adversarial examples. *ICML 2018*.
5. **Logan Engstrom\***, Brandon Tran\*, Dimitris Tsipras\*, Ludwig Schmidt, and Aleksander Madry. A rotation and a translation suffice: Fooling cnns with simple transformations. *ICML 2019*.
6. **Logan Engstrom\***, Andrew Ilyas\*, and Anish Athalye\*. Evaluating and understanding the robustness of adversarial logit pairing. *NeurIPS 2018 Machine Learning and Computer Security Workshop*, 2018

7. 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. Andrew Ilyas\*, Shibani Santurkar\*, Dimitris Tsipras\*, **Logan Engstrom\***, Brandon Tran, and Aleksander Madry. Adversarial examples are not bugs, they are features. 2019
2. **Logan Engstrom\***, Andrew Ilyas\*, Shibani Santurkar\*, Dimitris Tsipras\*, Brandon Tran\*, and Aleksander Madry. Learning perceptually-aligned representations via adversarial robustness. 2019
3. Shibani Santurkar\*, Dimitris Tsipras\*, Brandon Tran\*, Andrew Ilyas\*, **Logan Engstrom\***, and Aleksander Madry. Computer vision with a single (robust) classifier. 2019
4. Andrew Ilyas\*, **Logan Engstrom\***, Shibani Santurkar, Dimitris Tsipras, Firdaus Janoos, Larry Rudolph, and Aleksander Madry. Are deep policy gradient algorithms truly policy gradient algorithms? 2018

## Selected Projects

- **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

## Awards

- **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
- **PennApps** (UPenn's Collegiate Hackathon) *Top 8, Apple Prize* 2014

## 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
- **MIT Undergraduate Student Advisory Group in EECS (USAGE)** *Member* 2016-2017
- **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