

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*, **Logan Engstrom***, Shibani Santurkar, Dimitris Tsipras, Firdaus Janoos, Larry Rudolph, and Aleksander Madry. Are deep policy gradient algorithms truly policy gradient algorithms? 2018

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

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

- **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