

## Loc Q Trinh

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CONTACT INFORMATION	Computer Science Department 3710 McClintock Ave, RTH 321 University of Southern California Los Angeles, CA 90089 USA	<i>Office:</i> RTH 321 <i>Phone:</i> (408) 896-7998 <i>Email:</i> loctrinh@usc.edu <i>GitHub:</i> github.com/loc-trinh
RESEARCH INTEREST	Developing efficient and interpretable machine learning algorithms for analyzing large-scale structured data and improving trust towards automatic predictions with applications in social good and clinical care.	
EDUCATION	<p>Ph.D., <b>University of Southern California (2019 - Present)</b> Computer Science, Advisor: Prof. Yan Liu Viterbi School of Engineering</p> <p>M.Eng, <b>Massachusetts Institute of Technology (May 2019)</b> Computer Science and Engineering, Advisor: Prof. Aleksander Madry <i>Thesis: Greedy Layerwise Training of Convolutional Neural Networks</i></p> <p>S.B., <b>Massachusetts Institute of Technology (May 2018)</b> Computer Science and Engineering, GPA: 4.9 Minor in Mathematics</p>	
PUBLICATIONS	<ol style="list-style-type: none"><li>1. <b>L. Trinh</b>, M. Tsang, S. Rambhatla, and Y. Liu. Interpretable deepfake detection via dynamic prototypes. <i>arXiv preprint arXiv:2006.15473</i>, 2020</li><li>2. <b>L. Trinh</b>. Greedy layerwise training of convolutional neural networks (Master's thesis). <i>M. Eng., Massachusetts Institute of Technology</i>, Department of Electrical Engineering and Computer Science, 2019</li></ol>	
PRESENTATIONS	<i>Semi-supervised Learning for Clinical Phenotyping</i> , SuperUROP, Computer Science and Artificial Intelligence Laboratory, MIT, Cambridge, MA (Apr 2018)	
AWARDS AND HONORS	Advanced Undergraduate Research in AI and Machine Learning, May 2018 Lincoln Laboratory Undergraduate Research and Innovation Scholar, Dec 2017 AI Programming Competition Finalist, Battlecode, Jan 2017 1st Place Winner Built-From-Scratch, HackMIT, Sep 2016 QuestBridge National College Match Finalist and Scholar, Dec 2014	
RESEARCH EXPERIENCE	<p><b>MIT Madry Lab</b> Researcher, <i>Cambridge, MA</i> Aug 2018 - May 2019</p> <ol style="list-style-type: none"><li>1. Investigating network parameters and activation differences between adversarially robust neural networks and vanilla neural networks, both trained on ImageNet.</li><li>2. Analyzing the effects of sequential layer-by-layer training methodology on the performance, robustness, and representation of deep convolutional neural networks for large-scale image classification tasks.</li></ol> <p><b>MIT Clinical Machine Learning Group</b> Researcher, <i>Cambridge, MA</i> Aug 2017 - Aug 2018</p> <ol style="list-style-type: none"><li>1. Applying semi-supervised learning methods to the clinical phenotyping of 200K noisy electronic health records from Beth Israel Deaconess Medical Center (BIDMC).</li></ol>	

2. Working with ED clinicians from Harvard Medical School to develop robust human-in-the-loop algorithms to perform high-throughput patient phenotyping.
3. Helped develop the open-sourced learning framework currently being used at the Emergency Department within BIDMC.

### **CSAIL Learning and Intelligent Systems**

Researcher, *Cambridge, MA*

Jul 2016 - Jan 2017

1. Explored heuristic search, suboptimal search, and anytime search algorithms to build motion planning and execution system.
2. Applied supervised and reinforcement learning techniques to help robot learn basic primitive skills such as pushing a block or screwing on a bottle cap.

### **ADDITIONAL EXPERIENCE**

#### **Yelp**

Software Engineer, *San Francisco, CA*

Aug 2017 - Aug 2018

Software Engineering Intern, *San Francisco, CA*

June 2017 - Aug 2017

1. Worked on Yelp's restaurant ranking model and helped improve online traffic CTR near 1% for 30M daily restaurant queries.
2. Helped improve Yelp's learning to rank framework by implementing time sensitive signals along with key personalization features.
3. Helped improve Yelp's query understanding model using latest advances in recurrent neural network.

### **TEACHING ASSISTANT**

6.867 - Graduate Machine Learning, MIT, Fall 2018

6.008 - Introduction to Inference, MIT, Fall 2017

6.01 - Introduction to EECS, MIT, Spring 2015

### **PROGRAMMING LANGUAGES & FRAMEWORKS**

Proficient: Python, JavaScript, PyTorch, scikit-learn,  $\text{\LaTeX}$

Familiar: Java, C++, TensorFlow