

## EDUCATION

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### University of Illinois at Urbana-Champaign

Urbana, IL

*PhD Candidate in Computer Science*

*Sept 2020-Present*

### Massachusetts Institute of Technology

Cambridge, MA

*Masters of Engineering in Computer Science and Electrical Engineering; GPA: 4.8/5.0*

*Sept 2019 - May 2020*

- Relevant coursework: Graduate Machine Learning, Computer Vision, Natural Language Processing
- Thesis Title: Unifying Threat Data with Public Knowledge

### Massachusetts Institute of Technology

Cambridge, MA

*Bachelor of Science in Computer Science and Engineering; GPA: 4.5/5.0*

*Sept. 2015-June 2019*

## EXPERIENCE

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### University of Illinois at Urbana-Champaign

Urbana, IL

*Graduate Researcher*

*Sept 2020-Present*

- Graduate researcher working with Prof. Derek Hoiem on general purpose vision
- Current research focused on making vision systems that can adapt to new tasks and environments using meta-learning and transfer-learning

### Computer Science and Artificial Intelligence Laboratory, ALFA Lab

Cambridge, MA

*Graduate Researcher*

*Aug. 2019-May 2020*

- Developed relational database in Python of public threat data
- Experimented and tested evolutionary algorithms in Python to find weaknesses in networks using threat data

### Capital One

New York, New York

*Data Engineer Intern*

*June 2019-Aug 2019*

- Implemented machine learning based individualized dataset recommendation system
- Utilized PySpark to implement, train, and deliver model and recommendations
- Integrated system with Amazon Web Services and large existing codebase

### Computer Science and Artificial Intelligence Laboratory, ALFA Lab

Cambridge, MA

*Advanced Undergraduate Researcher*

*Sept. 2018-June 2019*

- Conducted and designed simulations to test computer network configurations ability to withstand attacks
- Utilized and improved optimization algorithms to develop robust network configurations
- Worked published at 2020 Workshop on Genetic and Evolutionary Computation in Defense, Security, and Risk Management

### Capital One

New York, NY

*Software Engineer Intern*

*Jun 2018 - Aug 2018*

- Researched and developed full stack application in Python to automate data extraction from loan documents (8Ks)
- Implemented project using agile development practices

## PROJECTS

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- **Exploring Chest X-Ray Classification** Implemented auto-encoder based CNN in PyTorch to classify chest X-Rays. Final project for Computer Vision class.
- **Joint Classification Using BERT and Limited Training Data** Implemented an extension of BERT in PyTorch for joint classification. Final project for Natural Language Processing class.

## PUBLICATIONS

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Derek Hoiem, Tanmay Gupta, Zhizhong Li, **Michal Shlapentokh-Rothman**, 2021. Learning Curves for Analysis of Deep Networks (In Submission) *Submitted to International Conference on Learning Representations*

**Michal Shlapentokh-Rothman**, Erik Hemberg, and Una-May O'Reilly. 2020. Securing the Software Defined Perimeter with Evolutionary Co-Optimization. *In Genetic and Evolutionary Computation Conference Companion (GECCO '20 Companion)*, July 8–12, 2020, Cancun, Mexico. ACM, New York, NY, USA, 9 pages.

## TECHNICAL SKILLS

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Python, Java, C#, Pytorch, Numpy