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Education

University of Illinois at Urbana-Champaign Urbana, IL
PhD Candiate 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

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

- **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

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

Python, Java, C#, Pytorch, Numpy