Matthew Olson

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Education

Expected 2022: Ph.D.. in Computer Science, Oregon State University
June 2015: B. S. in Computer Science, Oregon State University. Summa cum laude

Programming Languages, Tools & Classes

· Python, C#, bash, JavaScript, C++, C, Java
· Pytorch, NumPy/SciPy, Tensorflow, Latex, Git
· Machine/Deep/Reinforcement Learning, Artificial Intelligence, Theory of Statistics

Professional Training

· Project Management Fundamentals
· Dynamic Leadership
· Influence in the Workforce
· Visual Studio Live conference

Publications

Matthew Olson, Lawrence Neal, Fuxin Li, Weng-Keen Wong. *Counterfactual States for Atari Agents via Generative Deep Learning*. IJCAI Workshop on Explainable Artificial Intelligence, 2019.

Lawrence Neal, **Matthew Olson**, Weng-Keen Wong, Xiaoli Fern, Fuxin Li. *Open Set Learning with Counterfactual Images*. Proceedings of the European Conference on Computer Vision (ECCV). 2018.

Arpit Christi, **Matthew Olson**, Mohammad Amin Alipour, and Alex Groce. *Reduce Before You Localize: Delta-Debugging and Spectrum-Based Fault Localization*. IEEE International Workshop on Debugging and Repair. Memphis, Tennessee, October 2018

Experience

Graduate Research Assistant for Dr. Weng-Keen Wong (Sept 2017 - present)

- Collaborate closely with colleagues in the DARPA Explainable Artificial Intelligence project
- Develop techniques to explain the results of Deep Learning algorithms applied to Computer Vision, Reinforcement Learning, and Robotics
- Create Generative Adversarial Networks for the interpretation of AI systems

Machine Learning Research Intern, Bell-Labs (June 2019 - Aug 2019)

- Utilized state of the art language models to perform 4G/5G patent classification
- Developed new deep learning models to process long sequences of data

Software Engineer for Testbeds, HP Inc. (July 2015-Sept 2017)

- Developed and maintained .Net UI for a multi-million dollar fleet of printer test tools
- Became team lead for the motion control software on the R&D and production tools
- Collaborate with multiple international teams to develop new Thermal Inkjet technologies
- Traveled to Singapore to perform tool installation and training
- Created Software for real-time error correction on rotary encoders

Undergraduate Researcher for Dr. Alex Groce, Oregon State University (Mar 2014 - June 2015)

- Investigated Delta Debugging for the Siemens suite using Python and bash scripts
- Calculated Software Fault Localizations coefficients for the suite using Java

Software Engineering Intern, Hewlett Packard Enterprise (June 2014 - Sept 2014)

- Created a Java GUI for the networking utility Scapy
- Explored patent opportunities in the field of Digital Image Correlation
- Used and tested Intel's Data Plane Development Kit to increase networking performance