

Matthew Ciolino

mrkiolino@alum.lehigh.edu - (908) 967- 0559

EXPERIENCE

PeopleTec

Data Scientist

2020 - Present

- Applied state-of-the-art deep learning algorithms to investigate effectiveness in satellite imagery
- Trained low data quantized aware networks (TinyML) for object detection to detect rare objects at 75% accuracy
- Created internal APIs that automate critical tasks across the training of computer vision models using Docker
- Presented research at National and International Machine Learning Conferences (SPIE, NFCS, AI4I, NIAI, ICMLA)

Papers ([arXiv](#)): Fortify Machine Learning Production Systems: Detect and Classify Adversarial Attacks (1st ICMLA)
Training Set Effect on Super Resolution for Automated Target Recognition (1st SPIE)
The Chess Transformer: Mastering Play using Generative Language Models (2nd AI4I)

PeopleTec

Machine Learning Engineer

2019 - 2020

- Developed Super-Resolution framework that increased precision (mAP) for various computer vision tasks by ~15%
- Cleaned helicopter maintenance logs using a bootstrapped hierarchal work unit code classifier to correct over 300k misclassified maintenance events for the 160th Special Operations Aviation Regiment
- Implemented Gradient Boosting to provide real-time results 2000x faster at R-Squared of .97 for PEELS Lethality Sim

PeopleTec

Junior Engineer (C++ Developer)

2018 - 2019

- Developed fast, physics-based models for predicting damage and response of threat systems due to missile collisions
- Maintained and wrote efficient C++ and Fortran code for Parametric Endo/Exothermic Lethality Simulation (PEELS) using version control and coding guidelines to increase accuracy by 12% (Validation on Linux/Windows)

PROJECTS

Portfolio

[Matthew Ciolino Portfolio](#)

2018 - Present

- Flask/Bootstrap website containing various Paper Highlights, Project Code, and ML Demos

xEval Legislation Alerts

Cofounder - Data Science/Frontend - [Legislation Alerts](#)

2020 - 2022

- Established both UI/Frontend (NodeJS/Bootstrap) design and Data Science (recommendations) microservices
- Scraped and analyzed over 455k bills into a SQL database to provide over 125 customers with 13k daily alerts

Soterra: Women's Safety XPRIZE

Chief Technical Officer

2017 - 2018

- Led design of 1st mesh networking (IOT) commercial electronic device (C++) to enter women's safety device industry
- Won \$50,000 as a top 5 finalist among industry leaders during the XPRIZE summit in Mumbai, India
- Directed creation of mechanical (SolidWorks) and electrical (PCB) documentation for production of our device

EDUCATION

Georgia Institute of Technology, Atlanta, GA

Master of Science in Computer Science with specialization in Computational Perception & Robotics

2024

Lehigh University, Bethlehem, PA

Bachelor of Science in Mechanical Engineering and Minor in Aerospace Engineering

2018

ADDITIONAL SKILLS

Tensorflow, Pytorch, Python, Docker, Linux, Windows, AWS, Agile, C++, Git, JavaScript, HTML, CSS, SQL