ALEX THORNTON

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EDUCATION

Columbia University New York, NY
Master of Science in Electrical Engineering Expected May 2022
Specialization: Data-Driven Analysis & Computation
Notable Coursework: High-Dimensional Data Analysis, Deep Learning, Reinforcement Learning, Big Data Analytics

Binghamton University Binghamton, NY
Bachelor of Science in Electrical Engineering May 2019
Honors: Summa Cum Laude | Tau Beta Pi | Eta Kappa Nu | Phi Eta Sigma

TECHNICAL SKILLS

Software	C/C++, Python, Linux, Docker, Hadoop, Spark, AI/ML, Google Cloud Platform, DSP, Tensorflow, PyTorch, Big Data, Algorithms, MATLAB
Hardware	Cadence Virtuoso, SPICE, Analog/ Digital IC Design, 5G Systems, Massive MIMO, Communication Systems

PROFESSIONAL EXPERIENCE

Lockheed Martin Syracuse, NY
Machine Learning Engineer Sep 2021 - Present
- Integrated random forest and deep learning PyTorch models for IRAD electronic warfare effort
- Complemented existing software pipelines with AI models for improved performance

Engineering Leadership Development Program / Software Engineer Feb 2021 - Sep 2021
- Developed technical and soft skills through rigorous 10-month team lifecycle project and conferences
- Introduced GitLab runner continuous integration/ development shell scripts for lab automation
- Transitioned synthetic aperture radar (SAR) software interface for firmware and hardware upgrade

Systems Engineer Asc. Jun 2019 - Feb 2021
- Delivered technical demonstration as lead systems engineer for prospective $6 million contract
- Created GUIs and MATLAB tools for flight simulators and data analysis tools
- Designed algorithms to meet customer requirements using electronic warfare techniques

SRC, Inc. North Syracuse, NY
Radar Engineering Intern May 2018 - Aug 2018
- Modelled, analyzed, and verified system design and system performance for advanced radar systems
- Implemented signal processing and data analysis algorithms in MATLAB and Python

PROJECTS

Learning to Learn - Math Word Problem Kaggle Competition
- Ranked 3rd place in deep learning course Kaggle competition @ Columbia University
- Trained GPT-2 and graph2tree architectures to solve math word problems
- Cleaned and formatted various training datasets to improve model performance

Auto-Tune Application
- Designed GUI to play back and visualize audio inputs pitch corrected to a specific piano key or nearest note
- Developed signal processing technique to efficiently filter and pitch shift audio signals without loss of sound quality

ADDITIONAL HONORS

- Active United States DoD Security Clearance - SECRET, 2018
- IEEE Region 1 Research Paper Competition 2018 - Honorable Mention, 2018
- Eagle Scout - Boy Scouts of America, 2015