BASEM SALEH

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PROFESSIONAL EXPERIENCE

Lockheed Martin   Cherry Hill, NJ
Machine Learning Engineer   November 2022 - Present

- Helped secure over one million in funding for a project's second phase by classifying key customer frequencies using real-time digital signal processing machine learning models built from PyTorch.

- Spearheaded a project developing a model to enhance accuracy in program scheduling estimations which was later adopted by an internal team to develop into an official product.

- Authored an internal whitepaper evaluating efficacy of object detectors over image classification architectures in wideband signal applications.

- Enabled real-time field response capabilities by developing a supervised classification model for UAV signal type identification.

- Improved pneumonia classification model accuracy by 37% through custom model training and standing up an end-to-end machine learning training pipeline.

- Drove team efficiency and model data training support through authored documentation on Amazon S3 utilization.

- Automated preprocessing of new model data by engineering a Docker microservice with ActiveMQ.

Lockheed Martin   Cherry Hill, NJ
Software Engineering Researcher   March 2022 - November 2022

- Reduced team's code compilation time from 1 hour to 8 minutes using automated Gitlab CI/CD pipelines.

- Enabling seamless transmission and reception of proprietary research signals through usage of C++ to control the front-end of Software Defined Radios on custom 5G nodes.

- Ensured reliability and functionality of compiled hardware code by creating Unit Tests using Python and Bash within the software pipeline.

- Improved radio transmission range by 400% for customer demonstrations by selecting optimal antenna frequencies for custom 5G nodes.

- Aided in network error identification and resolution from a Python-based traffic monitoring tool designed for Docker containers.

Lockheed Martin   Moorestown, NJ
Software Engineer   July 2019 - March 2022

- Performed analysis on new calibration data to determine if radar calibration is sufficient for customer delivery using MATLAB.

- Saved over $70,000 in radar project costs by refactoring legacy architecture of a radar error model.

- Reduced radar panel calibration time from one day to 10 minutes using C# to control an oscilloscope and switch matrix.

- Analyzed and verified customer product functionality by collecting and analyzing S-parameter data from panel calibrations.

EDUCATION

Master of Science in Artificial Intelligence   Baltimore, MD
Johns Hopkins University *(GPA: 3.77)*   March 2026

Bachelor of Science in Electrical Engineering   Philadelphia, PA
Drexel University *(GPA: 3.61)*   June 2020

SKILLS

Programming Languages:	Python, MATLAB
Programming Libraries:	PyTorch, Tensorboard, OpenCV, Scikit Learn
Tools:	Gitlab CI/CD, AWS S3, Docker, KubeFlow, RoboFlow
Hardware:	Ettus Software Defined Radios, Microcontrollers
Spoken Languages:	English, Arabic (Egyptian)