

About Me

As an established machine learning practitioner and software developer, my aim is to apply artificial intelligence at the cutting edge and perpetually increase my expertise in the disciplines of machine learning and robotics; with the ultimate goal of becoming a leader in the field.

Education

MS in Computer Science with a Concentration in Machine Learning

George Mason University - In Progress - 2025

BS in Computer Science

George Mason University, Honors College - 2017

Experience

Senior Data Scientist BTI 360

February 2020 - Present

Language modeling and semantic text segmentation

Model dev in PyTorch and TensorFlow 2, deployment in Docker and Kubernetes

Machine Learning Engineer Next Century (CACI)

January 2019 - February 2020

Machine Learning research on Data Fusion to increase accuracy and correlation, while lowering noise. DARPA Media Forensics Program for DeepFake and other media manipulation detection.

Model development and research in PyTorch and TensorFlow.

Associate Software Engineer Innovative Defense Technologies

July 2013 - January 2019

Architected a cost-effective system for stress testing and benchmarking scalable distributed micro services and streaming platforms.

Docker, Apache Bench, JMeter, other stress testing tools

Ongoing customer site integration and product support

Designed and constructed a comprehensive Continuous Integration (CI) Pipeline and development suite

Jenkins, GitLab, Nexus, Jira, HipChat, Apache email

Machine Learning powered intelligent storage, sorting, and deletion of image files based on relevancy and task importance in a space constrained system.

Python, SQLite

Technical writer on SBIR proposal team

Discovered system vulnerabilities in a highly reduced timeframe via Machine Learning powered genetic algorithm fuzz testing.

Python, genetic algorithm

Improved optical character recognition (OCR) on low resolution imagery

Java, Tesseract (OCR tool), statistical modeling

Skills

Languages

Python

Java

JavaScript

Machine Learning

Classical ML

Deep Learning

Reinforcement Learning

Frameworks

PyTorch

TensorFlow

MXNet

Environments

Jupyter Notebook

Docker + Kubernetes

PyCharm / VSCode

Hobbies

Robotics

Current Project: SpotMicro, a miniature version of Boston Dynamics' Spot robot

Raspberry Pi, ROS2, 3D Printing, Miscellaneous hobby electronics



Raspberry Pi

Home Assistant based home automation system

Light control, Security system, Presence tracking

Home surveillance camera with chat bot integration for notifications

Python, Telegram

Trakr - WiFi analytics gathering program

Python, SQLite



Home Automation

Various Raspberry Pi's running home security, surveillance cameras, network wide ad-blocking, smart light control, presence detection, family location sharing and more!



MX-5 Miata

It's my daily driver but also my weekend project. Ask me about it!