

## 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; with the ultimate goal of becoming a leader in the field.

## Education

### **MS in Computer Science with a Machine Learning Concentration**

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**

Machine learning model design and engineering for various natural language processing tasks

PyTorch and TensorFlow 2, deployment in SageMaker and Kubernetes

### **Machine Learning Engineer Next Century (now part of CACI)**

**January 2019 - February 2020**

Research in machine learning data fusion for DARPA Media Forensics (MediFor) Program for the detection of deepfakes and other media manipulations

Model development and research in PyTorch and TensorFlow.

### **Associate Software Engineer Innovative Defense Technologies**

**July 2013 - January 2019**

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

Python, SQLite

Rapid discovery of system vulnerabilities via ML powered fuzz testing

Python, genetic fuzzing algorithm

Architected a cost-effective system for stress testing micro services

Docker, Apache Bench, JMeter, other stress testing tools

Improved optical character recognition (OCR) on low resolution imagery

Java, Tesseract (OCR tool), statistical modeling

Technical writer on SBIR proposal team

## Skills

### Environments

Jupyter  
AWS SageMaker  
Docker / Kubernetes  
PyCharm / VSCode

### Machine Learning

Deep Learning  
NLP  
Reinforcement Learning

### Frameworks

PyTorch  
TensorFlow  
MXNet

## 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

Daily driver and project car. Ask me about it!