PETER OTT

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About Me

As an established machine learning engineer 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 computer science and join the ranks of those leading the academic machine learning community.

Education

Bachelor of Science in Computer Science
George Mason University, Honors College - 2017

Skills

Machine Learning
Deep Learning
Reinforcement Learning
Neural Network Design
Linear Algebra, Statistics

Frameworks
PyTorch
TensorFlow
Keras
SciKit Learn

Languages
Python
Java
JavaScript

Environments
Jupyter Notebook
Docker
PyCharm

Experience

Machine Learning Engineer — **October 2019 - Present**
CACI
Next Century acquired by CACI.

- **Machine Learning Engineer** — **February 2019 - October 2019**
Next Century
Machine Learning research that lead to increased accuracy and correlation of image manipulation detection and DeepFake detection through Machine Learning Data Fusion on DARPA Media Forensics Program
    Model development and research in PyTorch and TensorFlow.

- **Associate Software Engineer** — **July 2013 - January 2019**
Innovative Defense Technologies
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

Personal Projects and Hobbies

Kaggle Contributor

Over 99% accuracy on hand written digit classification (MNIST Dataset)

2D conv. net, Keras

Accurate detection of fraudulent credit card purchases with data oversampling

Random forest, neural net, Keras

Taxi Fare prediction for New York taxi rides

Dataset of 50,000,000 rows with only 12GB of RAM

Pneumonia detection through on x-ray images with generated imagery

2D conv. net, image generation for training

Raspberry Pi

Current Project: TinyRL, small RL projects that can be run on a Raspberry Pi

TensorFlow

Home Automation via large Home Assistant setup

Light Control, Security System, Device Tracking, Home Server, Cloud IDE

Home surveillance camera with chat bot integration for notifications

Python, Telegram (chat platform)

Home Automation

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

MX-5 Miata

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