PETER OTT

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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, February 2019 - Present
Next Century, NextCentury.com

2019

Machine Learning research 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, IDTus.com

2018

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

2017

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

Python, SQLite

Technical writer on SBIR proposal team

2016 Executed STIG security compliance test to ensure software had been hardened to cyber security threats

Nessus, WireShark

2015 Discovered system vulnerabilities in a highly reduced timeframe via Machine Learning powered genetic algorithm fuzz testing.

2014 Python, genetic algorithm

Improved optical character recognition (OCR) on low resolution imagery

2013 Java, Tesseract (OCR tool), statistical modeling

Plot vehicle locations on NASA's WorldWind open source map

Automated testing, unit testing and bug fixes

Java, JUnit, ECLEmma

Personal Projects

Kaggle, kaggle.com/ottpeterr

99%+ accurate MNIST digit classification

2D conv. net, Keras

Fraudulent purchase detection

Random forest, neural net, Keras

New York Taxi fare prediction

Dataset of 50,000,000 rows

Pneumonia detection using x-ray imagery

2D conv. net, image generation for training

Raspberry Pi

Home surveillance camera Raspberry Pi with chat bot integration

Python, Telegram (chat platform), on my GitHub

Raspberry Pi 4-node cluster for Docker Swarm

Hobbies andInterests

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 Miatas

Ask me about it!