PETER OTT

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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 CS, Conc. in ML **[In Progress, ~2024]**
GMU - College of Engineering and Computing

BS in CS, with Honors College
GMU - College of Engineering and Computing

Experience

Senior Data Scientist **February 2020 - Present**
BTI 360

- Architected, lead, and maintained several ML projects that boosted productivity and increased situational awareness for customers. Projects have increased end user effectiveness with reduced overall costs.
- Achieved success in the domains of NLP classification, information consolidation and aggregation, and semantic segmentation; often designed custom neural nets for the task.
  Modeling in PyTorch, dev in Jupyter, and deployment in SageMaker
- Produced data analysis and model performance reports to inform customers of the data landscape and modeling results.
- Defined best practices for data science projects at BTI 360 with goals of standardization, readability, code reuse, and testing.

Machine Learning Engineer **January 2019 - February 2020**
Next Century (now a part of CACI)

- Research in deep learning data fusion for DARPA Media Forensics (MediFor) Program for the detection of deepfakes and other image / video manipulations
  Modeling and research in PyTorch and TensorFlow.

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

- 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
- Improved optical character recognition (OCR) on low resolution imagery
  Java, Tesseract (OCR tool), statistical modeling

Skills

Environments
Jupyter
AWS SageMaker
Docker
PyCharm / VSCode

Machine Learning
Deep Learning
NLP
Reinforcement Learning

Frameworks
PyTorch
TensorFlow 2
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 Assistant powered home automation
Various Raspberry Pi's and other low power hardware hosting 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!