

Robert Martino

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Education

- **Rensselaer Polytechnic Institute** **Troy, NY**
M.S. Computer Science, Cum Laude, GPA: 3.52/ 4.0 2017-2018
- **Rensselaer Polytechnic Institute** **Troy, NY**
B.S. Computer Science, Cum Laude, GPA: 3.60/ 4.0 2014-2017

Experience

- **Assured Information Security Inc.** **Rome, NY**
Research Scientist (DOD T.S. Clearance) January 2019 - Present
Hypervisor Threat Analysis:
 - Conducted Internal R&D projects on using machine learning to detect hypervisor intrusion from the host and created an evolutionary fuzzing methodology for binary analysis
 - Synthesized the projects for DARPA's SHEATH program, used evolutionary fuzzing in a sandboxed hypervisor to detect trojans on network interface cards
 - Publication came out of the work: <?>*Binary Comparison and Obfuscation:*
 - Conducted Internal R&D project for creating comparison metrics for obfuscated binaries using graph neural networks on control flow graphs
 - Recruited to the software engineering team to integrate binary comparison into existing production technology*Adversarial Reinforcement Learning:*
 - Conducted Internal R&D project on adversarial reinforcement learning for the board game Stratego
 - Created triggers for exploiting Deepmind's Alpha* on Starcraft2 minigames
- **GE Global Research Center** **Niskayuna, NY**
Fellow Intern May 2018 - August 2018
 - Successfully developed proof-of-concept machine learning prediction models for ultrasound images of subcutaneous lipomas
 - Created dataset and pipeline for the models, and achieved 85% classification accuracy on a noisy dataset
 - Reverse engineered a fault test generator for data extraction and integrated it into an industrial ethereum blockchain
- **Systems & Technology Research Inc.** **Boston, MA**
Machine Learning Intern May 2017- August 2017
 - Analyzed and predicted location and timing of notable events in the Middle East for IARPA's Mercury Program
 - Applied unsupervised learning to cluster data-sparse areas into prediction targets
 - Employed structured prediction to exploit geospatial relationships of prediction targets for higher accuracy
- **Rensselaer Polytechnic Institute** **Troy, NY**
Research and Teaching Assistant January 2017 - December 2017
 - Investigated computational social choice problems with Dr. Lirong Xia
 - Selected as undergraduate TA for CS 6100 *Machine Learning from Data* with Dr. Malik Magdon-Ismail

Selected Projects

- **Strat-O-Matic Football Server**
January 2021 - Present
 - Currently implementing the classic multiplayer sports board game in Python
 - Stood up as a web app with Django in Docker, using Redis to serve multiplayer functionality
 - Creating complex and modifiable statistical models for all NFL players from 1956-2020 to facilitate hyper-realistic game play between teams from different eras.
- **DilbertGAN**
October 2019 - August 2020
 - Scraped and cleaned custom dataset of all *Dilbert* comics since 1989 along with corresponding text and labels
 - Created a test bed with the data for testing SOTA GAN models and also experimenting with novel GAN approaches to image and natural language coherence across panels

Skills

- **Primary Language:**
Python - Tensorflow/Keras, Pytorch, pandas, numpy, opencv, Sklearn
- **Strong proficiency:**
Bash, Git, Linux, Docker, SQL, C, Wireshark, Agile Software Development