

# 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* January 2019 -  
*Hypervisor Threat Analysis:*
  - Conducted Internal R&D projects on using machine learning to detect hypervisor penetration 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
  - Leveraged the technology and expertise for AIS's COIL effort for Navy's <> program 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
  - Honed ability to communicate conceptually rigorous ideas to students in an easy to understand manner

## Selected Projects

- **Strat-O-Matic Football Server**  
*March 2019 -*
  - Implementing classic multiplayer sports board game in Python
  - Stood up with Django and Redis in docker running on AWS
- **DilbertGAN**  
*October 2019 - August 2020*
  - Scraped and cleaned custom dataset of all *Dilbert* comics since 1989 along with text and labels
  - Created a test bed with the data for 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*