Christopher Sweet

Seeking full time employment to begin a lifetime of learning
crs4263@rit.edu | 203.947.4094

EDUCATION

ROCHESTER INSTITUTE OF TECHNOLOGY

Bachelors & Masters of Science in Computer Engineering
Expected May 2019 | Rochester, NY
Cum. GPA: 3.71/4.00
Dean's List (2014-2018)

Masters Thesis on Cyber Security and Machine Learning
Conc. in Application Software Design
Minor in Psychology

LINKS

Github:// **SweetsRepo**
Alternate Email://
chris.sweet0320@gmail.com
Senior Design Website://
Embedded Racing Telemetry Acquisition System

COURSEWORK

GRADUATE
Machine Learning & Deep Learning
Performance Engineering of Real Time Embedded Systems
High Performance Architectures
Data Communication and Networks

UNDERGRADUATE
Multidisciplinary Senior Design
Interface and Digital Electronics
Applied Programming
Digital Systems Design
Power Electronics

SKILLS

PROGRAMMING
Daily Drivers:
Python • C • C# • Java
JavaScript (Electron) • MATLAB
Knowledgeable:
C++ • CUDA • Mathematica
Assembly (PIC, ARM, MIPS)
Familiar:
Verilog • VHDL• Android

NOTES

Active US Security Clearance

EXPERIENCE

MICROSATELLITE DEVELOPMENT AND OPERATIONS |
The Aerospace Corporation
May 2017 - Present | El Segundo, CA
Keywords: Python, System Design, Automated Testing, CubeSat
- Core system development of next generation, distributed, ground control software for microsatellites
- Development of networking API to efficiently forward data, commands, files between remote assets.
- Designed and implemented a custom testing framework for automated regression testing of subsystems within small satellites.
- Designed and implemented a graphing service with heavy focus on ease of expansion for future developers and handling visualization for big data.

ALGORITHM DEVELOPMENT |
UTC Aerospace Systems
May 2016 - December 2016 | Danbury, CT
Keywords: C#, Iron Python, MATLAB, Mathematica, Data Analysis
- Development and implementation of algorithms for optical processing, risk management, and chemical detection systems.
- The design and implementation of a CLR compliant Multiple Inheritance Pattern for C# to simplify the API hierarchy and function calls.
- Creation and verification of a slope mapping algorithm for interferometer data in Mathematica and C#.
- Worked on refactoring chemical detection software from a series of MATLAB scripts to an organized C# Project using Math.NET for matrix operations like Principal Component Analysis.

RESEARCH

NETWORK INFORMATION AND PROCESSING LABORATORY |
Research Assistant
Jan 2017 – Present | Rochester, NY
Creating a system using Generative Adversarial Networks to generate Network Intrusion Detection data from known malicious samples. Goal of the research is to use known, multi-modal, alert data to gain new understandings of potential cyber attacks. Working on verification of the model through histogram metrics (intersection, chi-squared-distance, euclidean distance) and first order Markov metrics.

PROJECTS

IDE AUTONOMOUS MODEL CAR RACING |
Used a PID controller, two DC motors, a servo, and various digital sensors to have a model car race along an arbitrary track autonomously. Click here to see the car during a practice run

LEADERSHIP

2012	Eagle Scout	Boy Scouts of America
2015	CT Contingent Leader	National Order of the Arrow Conference