James Gualtieri

412-334-5082   me@jamesgualtieri.com   jamesgualtieri.com

Education

Carnegie Mellon University

Graduation May 2019

Electrical and Computer Engineering
Software Systems

QPA 3.11

Programming

Coursework

- Fundamentals of Programming and Computer Science
- Principals of Imperative Computation
- Computer Graphics
- Computer Game Programming
- Introduction to Computer Systems
- Electronic Devices and Analog Circuits
- Structure and Design of Digital Systems
- Signals and Systems
- Fundamentals of Electric Power Systems
- Introduction to Computer Security
- Concepts of Mathematics
- Calculus in 3D
- Applied Computational Intelligence Lab

Campus Involvement

- Sigma Phi Epsilon Fraternity
  Booth Chairman (2017)
  Buggy Head Mechanic (2018)

- Orientation Counselor
- 1000+ Volunteer

Experience

ManTech International Coporation
Security Research Intern | Summer 2018

- Conducted security research (reverse-engineering and network forensics)
- Developed exploits for vulnerabilities mobile systems
- Detected vulnerabilities in embedded systems
- Developed internal plugins to existing software packages to aid in vulnerability detection

Tools: Python, C++, bash scripting

Carnegie Mellon Robotics Institute
Research Assistant, NavCog Project | Summer 2016

- Supported development and testing of a tool to allow the visually impaired accurately and reliably navigate inside buildings.
- Performed data collection and analysis to enable accurate localization.
- Deployed and managed BLE beacons to allow for accurate location services in indoor spaces.
- Configured server to allow for real-time beacon data collection. Contributed to software development for iPhone app.

Tools: Objective-C, Python, bash, PHP

Charles River Analytics
Software Engineering Intern | Summer 2017

- Worked with a team of scientists and engineers to enhance an enterprise system based using the Electron Platform.
- Implemented features across a full JavaScript web application stack with a focus on front-end development.
- Created refinements to the legacy products Investigated defects and proposed and implemented enhancements to existing features.
- Developed software for both web applications and desktop applications.

Tools: JavaScript, React, Node.js, Electron WebGL

Projects

- Scotty3D
  full 3D application including a mesh editor and ray-tracing renderer
- Phish
  Single player game built in python
- Face Race
  Game implementing blend shapes, built with OpenGL and C++