**Matthew Chu**

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**Education**

**Carnegie Mellon University,** Pittsburgh, PA

Master of Science in Electrical and Computer Engineering Expected December 2018

**Carnegie Mellon University,** Pittsburgh, PA

Bachelor of Science in Electrical and Computer Engineering Expected May 2018

GPA: 3.01/4

**Relevant coursework:**

* Operating System Design and Implementation
* Embedded Systems Design
* Machine Learning
* Computer Systems
* Computer & Network Security & Applied Cryptography
* Principles of Imperative Computation
* Computational Photography

**Work Experience**

**VencoreLabs,** Basking Ridge, NJ May-August 2017

Intern

* Implemented detection of compromised systems by analyzing classified unintended RF emissions from various electronic devices through a Hidden Markov Model.
* Improved detection of abnormal behavior in electronic devices from 72% to 88%

**Raytheon Integrated Defense Systems**, Andover, MA May-August 2016

Layout and Software Support Intern

* Developed software to convert between two significantly different design formats so that a single design could be easily ported between two different CAD tools (Cadence Virtuoso and ADS Keysight)
* Wrote SKILL utilities to increase design productivity with Cadence Virtuoso

**Projects**

**Pebbles OS Kernel** May 2017

* Designed and implemented a Unix-like kernel
* Implemented multiple virtual memory address spaces via paging, preemptive multitasking, and a small set of system calls
* Supplied device drivers for the keyboard, console, and the timer

**C0VM** December 2015

* Implemented a Virtual Machine for C0, a type-safe subset of C.
* Created test cases in C0 and byte code to test the validity of the VM.
* Learned how to perform low-level data and memory manipulation safely and efficiently.

**Collisions** December 2014

* Created a multi-level strategy game using Python and the pygame module set.
* Implemented collision detection, an efficient graphics display, and a basic enemy AI.
* Learned basic principles of GUI’s and object oriented programming

**Skills**

**Computer Languages:** Python, C, Unix Shell, Java, x86 Assembly

**Computer Tools:** MS suite, Quartus II, DVE, Matlab, Eclipse, Ubuntu, Windows