Tony **Abboud**

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Education

University of Maryland *College Park, MD*

B.S. Electrical Engineering, GPA: 3.8 *August 2011 - May 2014*

Skills

languages C, Python, Bash, Swift, ARM Assembly, (Have used: C++, Perl, PHP)

tools Git, MySQL, Vagrant, Vim, Xilinx

platforms Linux, UNIX, OSX, Windows

Experience

Lockheed Martin Advanced Technology Labs *Cherry Hill, NJ*

Research Engineer *April 2015 - Present*

- Implemented many new features for our network emulation testbed (ACORN), developed under DARPAs NCR:
  - Improved the performance and added features to our custom virtualization library for VMware ESXI
  - Added the ability to network between physical nodes and any virtual nodes running inside ESXI
  - Added a new blackbox node type which can be any piece of hardware with power and network capabilities (ex. Raspberry Pi)
- Designed and implemented a distributed testing framework to support the development of our network emulation testbed
- Re-architected an internal cloud and range management system to run our Malware Lineage Extraction Toolkit (MalLET) as a service and improve the performance

University of Maryland *College Park, MD*

Undergraduate Teaching Fellow *August 2012 - May 2014*

- Taught C programming topics, UNIX utilities, and digital logic design
- Designed programming assignments for the semester
- Automated the grading process for all projects and assignments to improve efficiency and validation
- Led recitation sections to help students debug code and answer questions

Projects

MPkernel

Jupyter Kernel for Micropython *September 2015 - Present*

- Python3 package to run a micropython repl inside of a Jupyter/Ipython notebook
- Provides interfacing with physical hardware over serial and socket connections
- Working towards a fully interactive environment to interface with the physical hardware (Ex. real-time data analysis of ADC values)

DropboxIgnore

.gitignore for Dropbox *January 2016 - Present*

- Leverages existing work to bring the gitignore functionality to the Dropbox client on OSX, Linux, and Windows
- Reverse engineering the latest Dropbox client to find the best way to hook into and ignore certain files
- Prototyped using python and makes use of the trie data-structure to increase performance

OBDII Telemetry System

Senior Design Project *January 2014 - May 2014*

- Provides real-time logging of OBDII data including engine temp, mpg and engine RPMs on a custom dashboard LCD display
- Utilized an RTOS to handle threading and graphics processing which enhanced the performance and user experience
- Designed a custom PCB and enclosure to connect and house the processor, LCD, and other components
- Hacked an existing OBDII-connector to add a bluetooth transceiver which provides wireless data transfers to the system