JOHN McCORMACK
Electrical and Computer Engineer

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Current: Lakeland, FL
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RESEARCH INTERESTS: COGNITIVE RADIO NETWORKS, INTERNET OF THINGS, SWARM ROBOTICS, MACHINE LEARNING, AND HUMAN MACHINE INTERACTION

SOCIAL

github.com/jmccormack200
jdmccormack.com
linkedin.com/in/jdmccormack

LANGUAGES

C
C#
Python
Javascript
Assembly
Verilog
Java
HTML5 and CSS
Erlang/Elixir
Latex
Cobol

SOFTWARE

Linux
Git
Unity3D
GNU Radio
OpenWRT
Node.JS
Vagrant
Virtual Box
Flask
PostgreSQL
MongoDB
Materialize
Matlab

EDUCATION

Florida Polytechnic University
Lakeland, FL ▪ Anticipated Graduation May 2016
Masters of Engineering
4.0 GPA ▪ Inaugural Class

University of California, Irvine (Extension)
Irvine, CA ▪ 2013-2014
Certificate in Embedded Systems Engineering
3.7 GPA

UMASS Lowell
Lowell, MA ▪ 2008-2012
B.S. Electrical Engineering
Minor in Sound Recording Technology
Graduated with Honors
Magna Cum Laude

Scholarships:
2014-2016 The Inaugural Scholarship
2014-2016 The Presidential Scholarship
2008-2012 The John and Abigail Adams Scholarship
2008-2012 The University Scholarship
2008-2012 The Engineering Dean's Scholarship
2008-2010 The FBI Alumni Scholarship

Honors and Awards:
2015 Best Hardware Hack - HackFSU
2012 Order of the Engineer
2011 Tau Beta Pi
2011 Etta Kappa Nu
2011 Order of the Engineer
2011 Omicron Delta Kappa
2009 Alpha Lambda Delta
2008-2012 The Commonwealth Honors Program

HARDWARE

Software Defined Radio
Atmel, TI, ARM µControllers
Xilinx FPGAs
Surface Mount Soldering
Oscilloscopes
Spectrum Analyzers
Logic Analyzers
I2C, SPI, UART
ADC/DAC
3D Printing
Raspberry Pi
Arduino
GoPiGo
Ar.Drones
BoeBot
Myo Armband
Leap Motion Plus
Oculus Rift

VOLUNTEER

2015 FLPoly Protothon
2015 IBM Bluemix Hackathon
2014-2015 Diversity Club
2014 GIS Day
2010 Triton H.S. Percussion
2009 Triton H.S. Marching Band

TRAVEL

People's Republic of China
Republic of Ireland
United Kingdom
Canada

PUBLICATIONS

McCormack, J. ; Prine, J. ; Trowbridge, B. ; Rodriguez, A. ; and Integlia, R. ; 2D LIDAR as a Distributed Interaction Tool for Virtual and Augmented Reality Video Games IEEE-Gem Conference, October 2015.

Trowbridge, B. ; Prine, J. ; Rodriguez, A. ; McCormack, J. ; and Integlia, R. ; Game Motivating Exercise IEEE-Gem Conference, October 2015.

WORK EXPERIENCE

Research Assistant
Florida Polytechnic University ▪ 2014 to 2016

Under the direction of Dr. Ryan Integlia I have had the opportunity to work with cutting edge equipment. My research centers around visualizing and controlling a cognitive radio based wireless sensor network in Unity3D. I am working as part of a small team and get to work on all aspects of the project. My current focus is on using GNURadio and USRP Software Defined Radios to establish the network. Once this is completed, I will pivot and work on controlling and visualizing the radios in Unity3D.

I have also developed an open source driver in python to communicate with the Robopeak LIDAR and used the Unity3D game engine to visualize the LIDAR point cloud. As Florida Polytechnic is a small school, I have also helped in establishing the VTC Lab and Electronics shop. I have helped generate proposals and purchase equipment in order to give other students the necessary tools and equipment they need to continue research and coursework. I also contributed to a proposal development for a Protothon lab event, funded 2015.

Teaching Assistant
Florida Polytechnic University ▪ 2014 to 2016

Since joining Florida Polytechnic I've had the opportunity to help prepare quizzes, exams, lectures, and homework assignments in conjunction with the instructor. I have helped coordinate and acted as a mentor at multiple hardware based hackathon type events we dubbed "protothons". I have lead numerous recitations. I have had the opportunity to help with Circuits I, Circuits I Lab, Intro to Engineering, Intro to Engineering Design, and Intro to Programming. I have also helped with the school's diversity club.

Engineer
Tivoli Audio, LLC ▪ 2012 – 2014

Tivoli Audio is an amazing consumer electronics company located in Boston, MA. Though Tivoli has been around for a while, they are a small company with a start-up style culture. I got my hands on all aspects of the design from ideation, to final assembly. I participated in the development of over 10 new products in my time there. I prototyped many of the products and I created BOM's and ECR reports to assist in the transition from prototype to production ready product.

I spent about 15% of my time there in China helping to address manufacturing issues. I generated both analog and digital designs for the products. Though my background at the time was mostly analog, this was where I began to become more interested in microcontrollers and the "Internet of Things". This curiosity ultimately lead me to leave the company to attend graduate school.

Intern
The MITRE Corporation ▪ 2011 – 2012

As an intern for the Theater Deployable Communications branch of MITRE my research focused on how software based VoIP phones could be integrated into the current Air Force infrastructure. My work allowed me to utilize Wireshark, Backtrack 5 (now Kali), Cisco switches, and other network testing equipment. I learned a lot about security and got to work on Hanscom Airforce Base. My work culminated in the publication of a white paper and a presentation at a MITRE technical exchange meeting with various members of the United States Armed Forces ranking as high as Colonel