Michael Greer

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SUMMARY

I am a PhD student at Colorado State University researching control of redundant manipulators. I have previous work experience researching embedded systems, constrained neural networks, and robotics. I am interested in finding ways robots and autonomous systems can help us better manage our natural resources and provide a higher standard of living for humans.

PROFESSIONAL EXPERIENCE

May 2020 – August 2020

Engineering Intern, ABB Robotics for Healthcare, Houston, Texas
  - Used Solidworks and ABB Robot Studio to design automation cells
  - Automated medical lab processes
  - Examples include pipetting, centrifuge tending, and Covid-19 test processing
  - Performed design review and electrical and mechanical assembly for prototypes

May 2018– August 2018 | June 2019– August 2019

Research Intern, MIT Lincoln Laboratory, Lexington, Massachusetts
  - Worked two consecutive summers for the Embedded and Open Systems Group (102)
  - Interfaced a Zynq Ultrascale+ SoC with an ADC to monitor power levels
  - Researched accelerated implementations on Ternary Neural Networks
  - Created software tools for generating embedded neural networks
  - Research yielded a 10x improvement over a naive implementation

May 2017– August 2017

Product Development Intern, AT&T IoT Foundry, Plano, Texas
  - Validated hardware and firmware using strict standards.
  - Created generalized software endpoints for IoT asset tracking solutions.
  - Researched the new Lightweight M2M protocol standard compared to existing solutions.
  - Implemented Firmware Over the Air system for cooler tracking devices.

August 2013– August 2016, Seasonal

Instructor, EA Young Academy, North Richland Hills, Texas
  - Taught students week-long classes in 3D Printing, Electronics, Python, and other tech skills.
  - Collaborated with other teachers to create comprehensive lesson plans.

April 2016– November 2016

Contributing Writer, All About Circuits
  - Researched and wrote articles about 3D printing and microcontrollers.
  - Worked with strict deadlines and a stringent editing process.
  - Author page: www.allaboutcircuits.com/author/michael-greer

SKILLS

- Languages: Java, Python, Matlab, C, C++, Rapid
- Software: Git, Autodesk, Unix, Tensorflow, ROS, Solidworks, ABB Robot Studio
- Hardware: AVR and ARM Microcontrollers, VHDL/Verilog FPGA Design, PCB Design
- Manufacturing: GCode, 3D printing, Board Assembly, SMT Soldering

EDUCATION

Currently Enrolled

Colorado State University

PhD in Electrical Engineering

Advisor: Dr. Anthony Maciejewski

GPA: 3.83

Graduated May 2019

Washington University in St. Louis

Bachelor's Degree in Computer Engineering, Minor in Robotics

GPA: 3.54

Relevant Coursework

Robotic Dynamics and Control

Robotic Simulation

Digital Control Systems

Nonlinear Control Systems

Digital Signal Processing

Image Processing

Embedded System Design

Computational Geometry

Digital System Design

Machine Learning

Awards and Honors

First Place and Best UX Design - University of Wisconsin MadHacks Hackathon

Best Use of Messaging Architecture - Wash U Archhacks Hackathon

Eagle Scout - Boy Scouts of America (Project was building a sundial at my elementary school)

Honorable Mention - UNT Health and Science Statewide Juried Art Competition

2014 RIT Innovation and Creativity Award