

# MICHAEL D'ARGENIO JR.

[dargenio.dev](http://dargenio.dev) // [github.com/mjdargen](https://github.com/mjdargen)

850-218-5397

[mjdargen@gmail.com](mailto:mjdargen@gmail.com)

Raleigh, NC 27606

## Education Experience

**M.S. Computer Engineering**

GPA: 4.0

Completion: May 2020

**B.S. Electrical Engineering**

GPA: 3.7

Completion: Dec 2014

**Graduate Teaching and Communication Certificate:** Completing >100 hours of coursework studying educational research and developing engaging curricula for diverse learning styles. Developed and delivered lessons, provided peer feedback, and constructed an educational portfolio.

**Relevant Projects:** JPEG Decoder, FatFS SD Datalogger, LCD Graphics Driver, Waveform Generator, miniC Compiler, Memory Cache, Branch Prediction, ecoPRT Vehicle Control System, GPS Line-Following Car

**Research:** Developing course materials, design tools, and projects for embedded systems courses.

## Skills

**Programming:** C, C++, Matlab, Python, HTML/CSS, Javascript, Verilog, Java, Visual Basic, LLVM, Flex/Bison

**Educational Dev Platforms:** Arduino, Raspberry Pi, Scratch, FRDM ARM Cortex MCUs

## Current Work Experience

**North Carolina State University, Raleigh, NC**

**Teaching Assistant for Electrical & Computer Engineering Senior Design Courses, Jul 2018-present**

- Oversee a lab with tools, equipment, and components for the 200 students in the design program.
- Manage course materials/websites, grade assignments, and develop supplemental materials.
- Teach workshops on embedded software development and debugging methodology.
- Provide technical and management expertise for projects across a wide variety of disciplines.
- Proposed and mentored a project for undergrads to design a product to improve home router security.

**Raleigh Community Kickstand Bicycle Cooperative, Raleigh, NC**

**Co-Founder, Webmaster, Database Application Developer, & Mechanic, May 2017-present**

- Helped found an all-volunteer, non-profit that pools community resources, repairs bicycles, teaches maintenance skills to enable access to safe, reliable, self-sufficient transportation for those in need.

## Prior Work Experience

**Duke University Talent Identification Program (TIP), Durham, NC**

**Instructor for Electrical Engineering Course, Summer Studies Program, May 2019-Aug 2019**

- Designed a rigorous course covering analog circuits, digital logic, power systems, programming, and product development to provide authentic, hands-on engineering design experiences in a lab setting.
- Facilitated a dynamic, creative learning environment in which students collaborated to engage with course material through discussions, practice problems, lab exercises, activities, and projects.
- Fostered an open, colloquial classroom in which the students discussed and presented on the NAE's Grand Challenges for Engineering and thought critically about the role of engineers within society.
- Students conceived and created final design projects, including Spirograph, Tetris, Medication Tracker, Sidescroller, Snake, DanceBot, DDR, Magic Piano, Fetchbot, Name that Tune, D&D Helper, LED Matrix.

**Schneider Electric, Staff Electronics Engineer, Raleigh, NC**

**Senior Electronics Hardware Developer, Electronics Design Group, Aug 2017-Mar 2018**

- Simulated, developed, and tested embedded hardware and generated supporting documentation.
- Designed a safety interface module which provides a safe-stop operation to critical systems.
- Designed an analog input/output module for current, voltage, and temperature.

**University Senior Design Project Coordinator, Jan 2016-Mar 2018**

- Created project proposals, generated funds, managed projects, and mentored students.

**Continuous Engineer, NA Electric Vehicle Products, Feb 2015-Aug 2017**

- Evaluated customer cases using 8D-analysis to determine root cause and implement containment, corrective, and preventative actions based on the failure mode.
- Led product adaptation projects for range expansion, component obsolescence, cost reduction, etc.
- Explored trends, participated in standards committees, and developed new product proposals.
- Managed continuous engineering budget and project plan for product line.

**Duke Energy, Co-Op, Charlotte & Raleigh, NC**

**Protection/Control Engineering & Transmission Asset Management, May 2012-Aug 2014**

- Developed a program to store parts data and generate standard transmission line structure drawings.
- Analyzed and created a summary report document on dynamic line rating technologies.
- Configured substation data managers and HMIs to monitor and control relays within a substation.
- Developed standards to upgrade from serial to IP communications for control of protective relays.

**WKNC Raleigh 88.1 FM, NC State University, Raleigh, NC**

**Program Director: Aug 2013-May 2014**

**Operations Manager: Sep 2011-Dec 2012, May 2013-Aug 2013**

**Blog Editor: Jan 2013-May 2013**