

# TOMMY MCMICHEN

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## EDUCATION

**Rose-Hulman Institute of Technology**, Terre Haute, IN

May 2020

*Candidate for Bachelor of Science in Computer Engineering and Computer Science*  
Dean's List (6 quarters)  
GPA: 3.84

## RELEVANT COURSEWORK

Computer Architecture II  
Intro to Embedded Systems

Discrete-Time Signals and Systems  
Data Structure and Algorithm Analysis

## SKILLS

*Programming:* Expert in C; Proficient in C++, Java, C# and MATLAB; Experience with Python, Socket Programming and Threading  
*Hardware:* Proficient with LabVIEW, LabVIEW FPGA, Verilog and FPGA Implementation; Experience with Microcontrollers  
*Productivity Software:* Experience with Linux Environment; Experience with PSpice; Experience with Perforce, SVN and Git

## EXPERIENCE

### National Instruments

May - August 2018

*R&D Software Engineering, Digitizers*

- Designed and Implemented FPGA logic for new function generator feature with LabVIEW FPGA
- Added kernel, driver and API support for new function generator feature
- Implemented full driver stack support for new oscilloscope triggers
- Communicated with multiple teams to add new entry points to .NET API

### Processor Design

October - November 2017

*Team Member*

- Designed and implemented a stack based processor capable of running in order assembly programs
- Developed ISA and assembly language for processor architecture
- Implemented architecture using Verilog and Programmed design on FPGA

### LED Cube

January - February 2018

*Designer, Software Developer*

- Designed a 5x5x5 LED Matrix using a PIC microcontroller
- Implemented Bluetooth capability as well as pattern storage and random pattern generation in C
- Developed an Android application to select between multiple display patterns using Bluetooth

### VEX Robotics Competition

August 2012 - June 2016

*Designer, Club President*

- Designed and programmed robot in C for the VEX Robotics Competition
- Implemented PID control for autonomous control and multitasked autonomous movements during operator control
- Documented robot development process and performed advanced analysis of design
- Organized club and team meetings, assisted in organizing local tournaments and community outreach

## ACTIVITIES

Webmaster of IEEE  
Member of Eta Kappa Nu