

Thomas R. Nabelek

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Objective

To establish my candidacy for a full-time position in which I will be able to exercise practical and purposeful application of my knowledge and expertise working at the intersection of hardware and software. I enjoy developing embedded systems and designing devices to interact, make decisions, and act upon those decisions.

Education

Master of Science in Computer Engineering, University of Missouri–Columbia May 2018 (Anticipated)
• GPA: 3.6

Bachelors of Science in Computer Engineering and Electrical Engineering, University of Missouri–Columbia May 2016
• Math and Computer Science minors • *cum laude*, GPA: 3.52 • Passed the Fundamentals of Engineering (FE) exam

Certificate for Embedded Systems course completion, University of Colorado Boulder July 2017

Proficiencies

- Embedded system development; integration of sensors and actuators with microcontroller devices; device prototyping; experience with different CPU architectures
- PLC ladder logic and devices; controls automation
- Experience with: programming/scripting and algorithm development using languages including C, C++, Matlab, Assembly Language, VHDL, Java, Swift; intertask communication, network communication, multithreading, realtime processing, etc.; ROS; networking protocols; UNIX command line; Linux systems; GNU toolchain; documentation
- Breadboard circuit design and construction, circuit analysis using Cadence PSpice, and experience with lab test equipment including oscilloscopes, power supplies, signal generators

Research Experience

Computational Intelligence Research Laboratory, University of Missouri 2016–Present
Graduate Research Assistant

- Working on an Office of Naval Research project doing feature extraction and image segmentation on synthetic aperture sonar imagery for the purpose of mine detection
- Published a conference paper detailing research findings, will present at conference Apr 2018

NASA Langley Area Research Center 2017
Computational Engineering Intern

- Worked as a member of the High Performance Computing (HPC) Incubator to demonstrate the use of HPC methods on computationally-intensive portions of mission codes
- Educated researchers on the use of HPC methods for efficient computational problem solving

Lawrence Livermore National Laboratory 2015
Computational Engineering Intern

- Accelerated the solving of electromagnetic field problems by optimizing matrix-vector multiplication code for GPU devices using CUDA
- Presented “Using GPUs to Accelerate the Solving of Electromagnetic Field Problems” poster
- Gained experience in a high-security facility

Networking and Parallel Systems Lab, University of Missouri 2013–2015
Undergraduate Researcher

- Programed for efficient parallel processing using C++, Pthreads, OpenMP, and CUDA
- Developed an object-oriented software framework for graph generation and analysis
- Presented “A Software Framework for Graph Generation and Analysis” poster
- Attended SC14 supercomputing conference as a student volunteer

Activities

Engineers Without Borders, 2012–Present, President
Newman Volunteer Corps, 2014–Present
Mizzou Engineering Ambassadors, 2014–2016
Dean’s List, 2013, 2014, 2015, 2016

Awards

Lloyd E. Hightower Scholarship, 2015
2nd place, IEEE Computational Intelligence Society poster contest, 2014
Bright Flight Scholarship, 2012, 2013, 2014, 2015
Curators Scholar Award, 2012, 2013, 2014, 2015