Christopher D. **Tannock**

Embedded Systems Engineering

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Education

Northeastern University — *Boston, Massachusetts*

Candidate for B.S. in Electrical Engineering — *May 2018*

Minor in Mathematics — *Major GPA: 3.46/4.0; Cum. GPA: 3.24/4.0*

Relevant Courses: Circuits and Signals, Electronics, Algorithms, Embedded Design, Assistive Robotics, Calculus 3, Nonlinear Dynamics, Differential Equations w/ Linear Algebra, Probability and Statistics

Extracurricular Activities: Institute of Electrical and Electronic Engineers, Husky Ambassador, Part-Time Admissions Assistant, Intramural Flag Football, Soccer, and Broomball

Engineering Experience

ProGlove - Workaround GmbH — *Munich, Germany*

Embedded Systems & Hardware Co-op — *May 2016 - December 2016*

- Collaborated with industrial designers and software engineers to improve UI/UX on STM32 MCUs in embedded C.
- Assisted in the in-house production of wearable barcode scanning units by soldering and assembling devices for market.
- Further refined products using PCB layouts and schematics developed in CadSoft Eagle.
- Designed and executed tests to check hardware performance and durability of initial product.

Keurig Green Mountain — *Burlington, Massachusetts*

Embedded Software Co-op — *July 2015 - December 2015*

- Expanded on a VB.NET application to extract serial communication data from new appliances for the Data Analytics team.
- Designed a PC UI application to quickly test SPI communication between PIC microcontrollers and TotalPhase adapters.
- Developed hardware peripheral modules and embedded unit tests in C.
- Refined coding standards and templates with configurable code formatter to unify software team efforts.

Massachusetts Institute of Technology - Lincoln Laboratory — *Lexington, Massachusetts*

Undergraduate Research Intern — *Summer 2014*

- Researched means of increasing run-time performance when extracting oceanic data at various resolutions by creating MATLAB executable functions within C/C++ projects.
- Compiled and implemented sonar modeling and simulation software for use with sound velocity profiles and gridded bathymetry models.

Naval Undersea Warfare Center — *Newport, Rhode Island*

High School Student Intern — *Summer 2012 & 2013*

- Scanned various material samples with a terahertz imaging sensor and processed signal data in MATLAB showing hidden defects and subsurface structures.
- Performed experiments and analyzed stress levels in towed arrays with a mechanical shaking device and data collection software.

Skills & Qualifications

Software Skills:

Languages:
C/C++, MATLAB, VB.NET, XML, HTML, CSS

Productivity Tools:
JIRA, Confluence, Trello, YouTrack, Slack

Version Control:
SourceTree, Git, BitBucket

Microcontrollers:

Devices:
Arduino, PIC32, STM32

Hardware Peripherals:
Timers, Interrupts, UART/SPI/I2C

Debugging Tools:
TotalPhase Logic Analyzers

Hardware:
Soldering, Oscilloscopes, Schematic Design, PCB Layout

Miscellaneous:
Knowledge of Simulink, SolidWorks, Multisim
Exposure to VHDL, PSpice, Autocad

Projects

- Designed and prototyped an automated door lock with a wireless wearable communication system for the elderly using Arduinos, Bluetooth, an LCD Display and 12V Solenoid.
- Explored programming in HTML and CSS by developing my own personal website.