Christopher D. **Tannock**

Embedded Hardware & Product Development

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Education

Northeastern University — *Boston, Massachusetts*

Bachelor of Science in Electrical Engineering — *May 2018*

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

Relevant Courses: Linear Systems, Digital Logic Design & Computer Organization, Robotics, Circuits & Signals, Electronics, Algorithms, Embedded Design, Assistive Robotics, Nonlinear Dynamics, Differential Equations w/ Linear Algebra, Probability & Statistics

Extracurricular Activities: Generate Product Development Studio Engineer, Institute of Electrical & 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*

- Designed and maintained management processes related to product performance, functionality, and physical attributes during life cycle to ensure cross-departmental integration.
- Added software features like battery indication UI/UX, updated schematic designs to help prepare devices for the USA market, and modified existing PCB routing to resolve bugs found in the early prototyping stages.
- Worked closely with suppliers and manufacturers by testing products at production sites as well as in the field to help bring over 2000+ devices to market.
- Developed design thinking techniques with customers and design experts in various workshops in preparation for second product.
- Built various product prototypes and test rigs ranging from soldering under a microscope to writing Arduino code.

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.

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, Multimeters, Function Generators

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

Projects & Interests

- Developing an embedded, smart tape measure for a client pushing to disrupt the fashion industry with the Northeastern Generate Build Studio.
- 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 to develop personal website.
- Working proficiency in German. (A2/B1 Level on the Common European Framework Scale)
- Die-hard Boston sports fan, avid snowboarder, and aspiring to learn something new everyday.