Thomas **Harmon**

Computer Engineer · Software Developer

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Education

Northeastern University | GPA: 3.85/4.0   *Boston MA*
Bachelor of Science in Computer Science and Computer Engineering   *May 2020*

Relevant Courses: Algorithms & Data, Object Oriented Design, Computer Systems, Logic & Computation, and Database Design

Skills

Languages   Java, C/C++, Python, JavaScript, CSS, HTML, SQL, MATLAB
Software and Tools Git, Bootstrap, Docker, Linux, GDB, ROS, IntelliJ

Work Experience

Northeastern University RIVeR Laboratory   *Boston MA*
Undergraduate Researcher   *Jan. 2018 - July 2018*

- Integrated open-source robotics libraries into a ROS framework using python, to develop facial recognition and person following modules.
- Competed in a RoboCup@Home competition in Montreal, Canada as part of a team of researchers. Placed 4th internationally.
- Researched optical flow and its applications into autonomous navigation, implementing multiple optical flow algorithms and testing their performance on real hardware.

Draper Laboratory   *Cambridge MA*
Advanced Concepts Intern   *Jan. 2017 - July 2017*

- Created a custom back-end Java application to translate system engineering models from the modeling language OpenMETA to sysML.
- Built a graph database to support continuous integration of system engineering models to modernize the file-based approach in use.
- Created an interface to push and pull data using a RESTful API from the graph database and auto-generate a sysML model. Iterated on the design to incorporate live differencing of the model.
- Utilized ANSYS Electronic Desktop to model the effect of varying RF wavelengths on the operation of a simple PCB based on trace dimensions.

Punahou School   *Honolulu HI*
Teacher's Assistant | AP Statistics   *Sept. 2014 - May 2015*

- Planned and updated learning material based on past student performance which helped further students' understanding.
- Coached struggling students to help achieve a 100% pass rate.

Extracurricular Activities

Wireless Club   *Boston MA*
Vice President   *Oct. 2015 - Sept. 2017*

- Focused on revitalizing interest and participation in an electrical engineering focused club. Developed a club website to improve club visibility.
- Organized introductory workshops which raised newcomer retention, doubling club-wide weekly meeting attendance.
- Hosted 48-hour long hackathons, challenging 20+ competing teams, to create themed electronics hardware.

Technical Projects

Futures Database (Ongoing)   *Boston MA*
Data Collection, Analysis | Python, MySQL   *Spring 2019*

- Collecting OHLCV data and volume histograms for multiple futures contracts to be used in a later project on data analysis and visualization.

Personal Website (Ongoing)   *Boston MA*
Front-end Web Development | HTML, CSS, JavaScript, Bootstrap   *Spring 2019*

- Using Twitter's Bootstrap, developing a mobile and desktop-friendly personal website to display projects and a professional portfolio.

Animator Project   *Boston MA*
Object Oriented Design Project | Java   *Fall 2018*

- Utilizing MVC architecture, built an interactive Java program capable of animating shapes, capable of reflecting user edits in real time.