

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: Artificial Intelligence, Intro to Machine Learning, Algorithms & Data Structures, Software Design, Object Oriented Design, Computer Systems, Logic & Computation, Database Design, Electronics, and Digital Logic and Design

Skills

Languages Java, JavaScript, Python, C/C++, SQL, CSS, HTML, MATLAB

Frameworks and Tools React, TensorFlow, J2EE, Spring, Hibernate, NodeJS, Git, Docker, Gatsby, ROS

Work Experience

PowerAdvocate

Boston MA

FULL STACK SOFTWARE DEVELOPER INTERN

July 2019 - Dec. 2019

- Developed new features for front end applications using React and back-end systems using Spring MVC, Hibernate, J2EE, and SQL databases.
- Spearheaded the redesign of a J2EE monolithic web application into a Service Oriented Architecture. Lead the transition to a Star Schema, creating a 2-10x speedup of key customer features. Leveraged performance logging data to optimize the slowest SQL queries.
- Collaborated with other developers by pair programming. Practice Agile Development under a Continuous Flow framework.

Northeastern University RIVeR Laboratory

Boston MA

UNDERGRADUATE RESEARCHER

Jan. 2018 - July 2018

- Developed facial recognition and person following packages using ROS for the Toyota HSR to be used in a RoboCup@Home competition.
- Competed in a RoboCup@Home competition in Montreal, Canada as part of a team of researchers. Placed 4th internationally.
- Researched optical flow and its application for autonomous navigation, implementing multiple algorithms and testing their performance.

Draper Laboratory

Cambridge MA

ADVANCED CONCEPTS INTERN

Jan. 2017 - July 2017

- Created a Java application to translate system engineering models between the modeling languages OpenMETA and sysML.
- Designed a graph database to support continuous integration of system engineering models to modernize the file system approach in use.
- Integrated database and Java app into a continuous integration workflow for engineering models, greatly improving engineering efficiency.
- Utilized ANSYS Electronic Desktop to model the effects of varying RF wavelengths on the operation of a PCB based on trace dimensions.

Technical Projects

Touchless User Interface

Boston MA

COMPUTER VISION, MACHINE LEARNING | PYTHON, OPENCV, TENSORFLOW

Summer 2019

- A year long, team capstone project to build a computer-vision based touchless user interface with a monocular RGB camera and machine learning. Recognizes static or dynamic gestures and allows new gestures to be trained on demand and linked to a repository of IoT applications.

Personal Website | Harmon.tech

Boston MA

WEB DEVELOPMENT | REACT, JAVASCRIPT, HTML, CSS, GATSBY

Summer 2019

- Using React and Gatsby, developed a responsive website to display personal projects and a professional resume.

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.

Punahou School

Honolulu, HI

GLASSBLOWING HOBBYIST

Sept. 2015 - Present

- One of three students chosen out of over 30 enrolled for an exclusive art show at an alumni event.
- Only student chosen for a month long summer apprenticeship under glassblower Russ Katto.