

# Mark Lang

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<http://marklangdeveloper.com>

<https://github.com/mlang251>

## Northeastern University, Boston, MA

Bachelor of Science in Electrical Engineering

May 2017

GPA: 3.756

Honors: Dean's List (all academic semesters)

Relevant Coursework: Data Structures & Algorithms, Advanced Writing in Technical Professions

Activities: NU Songwriters Club, NU Choral Society, Acoustical Society of America

## Web Development Training

Current academic courses: Fundamentals of Networks

Lynda courses: HTML5: Structure, Syntax, and Semantics, Javascript Essential Training,

Bootstrap 3 Essential Training

Codecademy courses: HTML & CSS, Javascript, jQuery, ReactJS, Python, Git

## Tools and Languages

Proficient in: HTML5, CSS3, Javascript, jQuery, Bootstrap, Git

Experience in: React, Python, Batch, C++

## Capstone Project

*Audio Expression Box*

May 2016 - Present

Purpose: To build a tool that can sense a music performer's hand motions in a three dimensional Cartesian system, and use the xyz coordinates, as well as hand gestures, to change the parameters of audio effects in real time

Primary Responsibilities: Development of a web app UI using ReactJS for the purpose of setting up the tool, selecting audio effects to place in the audio signal path, building presets, providing visual feedback of user's hand position, showing frequency spectrum of the audio stream in real time, and communicating with external scripts to send/receive data

Secondary Responsibilities: Programming the motion tracking system using Python, creating digital audio effects using the MaxMSP software package

## Professional Experience

### **QinetiQ-North America – Waltham, MA**

July 2016 - Present

*Electrical Engineering Robotics Hardware Co-op*

- Providing electrical engineering support for a 10-person team while working with many simultaneous projects, such as design of internal parts for robot systems
- Originated more than 30 technical drawings in Microsoft Visio and procedural documents in Microsoft Word to be used for internal production reference
- Tested and performed troubleshooting on more than 50 printed circuit boards as well as full systems, with the purpose of debugging failures and preparing for production

### **Celera Motion – Bedford, MA**

June 2015 – Apr 2016

*Electrical Engineering and Product Marketing Co-op*

- Managed the company social media pages, published one post per week on various field-related topics, with the purpose of directing traffic to company website
- Wrote a customer facing technical document which gave an explanation of a proprietary technology, for the purpose of educating customers on using the technology
- Provided feedback on company website and YouTube videos, resulted in many changes and edits made to website UX and video layout
- Diagnosed product electrical failures and created documentation to be used as a guide for fixing common issues while manufacturing boards

### **Bose Corporation – Framingham, MA**

June 2014 – Jan 2015

*Product Safety Co-op*

- Disassembled products and found root causes of failures, generated technical reports of findings which led to re-design of some products to avoid possible electrical safety hazards