

**EDUCATION**

**TUFTS UNIVERSITY** | SEPT 2016 – PRESENT | MEDFORD, MA | EXPECTED GRADUATION: SPRING 2019 | GPA: 3.90  
Bachelor of Science: Computer Science

**RELEVANT COURSEWORK**

Networks, Computer System Security, Machine Structure and Assembly Language, Theory of Computation, Algorithms, Graphical User Interfaces and Object-Oriented Programming, Programming Languages, Database Systems, Web Programming, Data Structures, Electronic Music Instrument Design, Recording and Production, and Computer Tools for Musicians

**WORK  
EXPERIENCE**

**KURZWEIL RESEARCH AND DEVELOPMENT SOFTWARE INTERN** | JUNE 2018 – SEPT 2018 | WALTHAM, MA

- Developed two web interfaces, the HomePianoApp and the WebSynth, to control Kurzweil's CUP and Forte series home and stage pianos via MIDI
- Designed the sites to allow easy access to musical parameters on both desktop and mobile platforms
- Implemented using Kurzweil's system exclusive MIDI protocol, Google's WebMIDI API, Javascript, and HTML

**COMPUTER SCIENCE TEACHING ASSISTANT** | SEPT 2017 – PRESENT | MEDFORD, MA

- Taught as a teaching assistant for Tufts' Data Structures and Machine Structure and Assembly Language courses
- Ran labs, graded homework assignments, and tutored students in object-oriented programming

**MUSIC EVENTS TECHNICAL STAFF** | JUNE 2017 – PRESENT | MEDFORD, MA

- Ran audio and video technology for music events at Tufts University's Distler Hall
- Post-produced events using Pro Tools, Adobe Audition, and Adobe Premiere
- Upgraded and maintained the music computer lab in Granoff Music Center

**SKILLS****PROGRAMMING**

C, C++, Python, Emacs, Git, JavaScript, Java, CSS, HTML, PostgreSQL, MAX MSP, WebMIDI API, Satori API, TripAdvisor API, Google Maps API, and Node.js

**AUDIO AND VIDEO EDITING SOFTWARE**

Pro Tools, Sonar X3, Digital Performer, Adobe Audition, Adobe Premiere, and Final Cut Pro

**PROJECTS**

**TUFTS TEXTBOOK EXCHANGE DEVELOPER** | JUNE 2017 – PRESENT | MEDFORD, MA

- Developed website that has facilitated over one hundred thousand dollars of used textbook sales at Tufts
- Built back end server with Node.js
- Used Javascript and HTML to create front-end user interface

**ELECTRONIC MUSIC INSTRUMENT DESIGN DEVELOPER** | MAY 2017 | MEDFORD, MA

- <https://github.com/JacobJaffe/EMID>
- Built the SHIDI (Skee-ball Hyper Interactive Digital Instrument), an electronic instrument that is played by rolling colorful skee-balls over an inclined surface
- Designed MAX MSP patch to interface with a network stream of data and convert it into MIDI, which is then sent to a Reason patch

**2 SIDES 2 CENTS FRONT-END DEVELOPER** | JULY 2017 | WALTHAM, MA

- <https://github.com/Emerson-Wenzel/AHBos>
- Built web application that encourages and facilitates healthy debate between users on controversial topics
- Implemented front-end using JavaScript and Satori API

**TRIPPY ADVISOR FRONT END-DEVELOPER** | OCTOBER 2016 | MEDFORD, MA

- <https://github.com/JoeHowarth/TrippyAdvisor>
- Designed user interface for web application that dynamically creates random day trips for users
- Implemented using HTML, CSS, and the TripAdvisor API