# KIRSTEN RAUFFER

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#### **EDUCATION**

Undergraduate • Rutgers University

September 2012 - March 2016, New Brunswick, New Jersey Computer Science, Cumulative 3.26 GPA

Exchange • Technische Universität München

October 2015 - March 2016, Munich, Germany Robotics, Machine Learning, Autonomous Driving, iOS Practical

## **SKILLS**

Most Experience • C, Java, PHP, MySQL, SOQL, HTML5/CSS3, JavaScript, Arduino, Processing, Adobe Creative Suite, Salesforce Some Experience • C++, Swift, Objective-C, OpenGL, Apex, Visual Basic, Python, R

### RESEARCH EXPERIENCE

Research Assistant • Aresty Research Center

September 2014 - May 2015, New Brunswick, New Jersey

Created the first travel-ready polyphonic robotic musical instrument with electromechanic and electromagnetic actuation. A heart-rate monitor was used as a sensor-based control mechanism to alter the tempo of the music played by the robotic musical instrument based on the user's heart-rate, allowing for potential therapeutic benefits.

- Conceptualized, modeled, and constructed the instrument using a laser cutter and 3D printer
- Responsible for all Arduino programming using the MIDI library
- Created documentation for the results and weekly progress of our robotic instrument
- ♦ Formally presented the research at the annual Aresty Research Symposium

#### FIELD EXPERIENCE

Project Management Intern • UnitedHealth Group, Optum Technology

June 2015 - August 2015

Worked in Program Project Release Management (PPRM) department as a member of the Agile Scrum team, adhering to all scrum methodologies. Developed a management tool featuring a search engine for projects, portfolios and employees using Salesforce's Visualforce platform.

- Responsible for front-end and back-end development throughout the project, maintaining scalability and responsiveness
- Designed the UX, UI, and logos for several management tools and concept applications at the company, including exer-gaming applications and applications dealing with social change
- Coded several Excel macros to improve efficiency of analyst work

Salesforce | Apex | SOQL | HTML5 | CSS3 | Javascript | Jquery | Visual Basic

### Electrical Engineering Intern • PSEG, Public Service Electric & Gas

May 2013 - October 2014, Newark, New Jersey

Worked as a technical intern in the Controls Design department designing circuits for high voltage power systems.

- Evaluated and implemented changes to schematics and wiring diagrams for various field-marked Controls design drawings
- Designed circuits for the installation of an SEL-735 solar meter and an ESOC communication switch in several substations
- Coded Excel macros and improved the efficiency of pre-existing macros for several department-wide excel files
- Analyzed the department's efficiency and created useful data visualizations for the department

Visual Basic | MicroStation v8

# **SELECT PROJECTS**

Crave Tracks // Summer 2015

Responsible for the website design and front-end development for the music blog Crave Tracks.

HTML5 | CSS3 | Javascript | Jquery

# Crit It // Spring 2015

Created a critiquing platform for art students. Professors can set up a course page for students to post their art work and critique their peers' work. Professors and teaching assistants can monitor the participation and progression of students. PHP | MySQL | HTML5 | CSS3 | Javascript | Jquery

# Up // Spring 2014

Developed and designed an alarm clock where the alarm's ringtone changes based upon the weather, allowing the user to know the weather upon waking. Application displays predicted weather for the rest of the day, as well as suggested activities for the day using Foursquare's API.

Objective-C