# SAM FENG

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## SKILLS

**Software:** C#, C++, MATLAB, Python, Arduino, R
**Web:** JavaScript, HTML, Django, React, Node.js, MySQL
**Tools:** Git, JIRA, Balsamiq, OmniGraffle, InVision, SolidWorks, Soldering

## WORK EXPERIENCE

### Research Trainee in Computational Medicine
Apr – Aug 2018

*The Hospital for Sick Children – Toronto, Ontario*

- Facilitated technical development by delegating **JIRA** action items and identifying client requirements
- Created a **Dockerized** web application using **React** and **Node.js** that displayed genomic data (retrieved from asynchronous API calls) which resulted in second-authorship of an academic paper
- Designed user interface for the application using **Balsamiq**, prioritizing usability and simplicity
- Performed connectivity analysis on MRI images, using **FSL** and high performance computing clusters
- Developed **Python** (pandas, numpy) scripts to format longitudinal data for **MySQL** database imports

### Medical Device Software Developer
Sept – Dec 2017

*Intellijoint Surgical – Waterloo, Ontario*

- Designed, refactored, and implemented an application using **JavaScript** (JQuery and FabricJS libraries), **Bootstrap**, and **Django**, used to plan pre-operative total hip arthroplasty (THA)
- Released the THA application as an alpha prototype, and adapted features to surgeon feedback
- Participated in **design sprints** with the R&D team to improve facets of intellijointHIP using **Objective-C**
- Completed **unit tests** and functional testing for intellijointHIP

### Web + Technologies Developer
Jan – Apr 2017

*Ontario Institute for Cancer Research – Toronto, Ontario*

- Transformed product requirements into technical specifications through feature analysis of mockups using **OnmiGraffle** and delegation of implementation tasks through **JIRA**
- Designed interactive prototypes utilizing **InVision** to initiate discussion with clients
- Utilized **MERN** and **LAMP** technology stacks to maintain sites in a **Linux** environment: backed up MySQL databases, queried in MongoDB, and created JSON Schemas for API integration

## PROJECTS

### Research Assistant
Sept 2018 – present

*Vision and Imaging Processing Lab – Waterloo, Ontario*

- Performed data cleaning and statistical analysis using **Python** and **MySQL** to study and predict longitudinal effects and patterns of cyanobacteria and microcystin on water quality

### Freezing of Gait Detector
Nov – Dec 2016

- Developed portable medical device using **IMUs** and **Arduino** alleviate freezing of gait in Parkinson's patients in real-time, utilized **MATLAB** to detect patterns of perilous walking

## INTERESTS

- Intramural soccer, lacrosse, Latin dancing, skiing, baking