Manfred·Cheung

Engineering • Development • Design

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Technical Skills

- Proficient with ES6 JavaScript, React, Bootstrap, Node, JQuery, CSS/SASS, and Git SCM
- Familiar with D3, ThreeJS, and MATLAB
- Experience with of Java, PHP, Ruby, C++, C#, and mySQL

Experience

Dash Intern Engineer · PLOTLY   May 2019 – Aug 2019

- Worked on Dash-Cytoscape and Dash-Bio, open source libraries used for graph theory and bioinformatics visualization respectively
- **Evaluated and integrated 3rd-party plugins** into Dash-Cytoscape such as a graph node context menu plugin
- **Developed new requested features** for Dash such as an addition to Dash-Cytoscape to make Cytoscape responsive
- Optimized in-house components and made contributions to Dash supported 3rd-party open source components for **speed, reliability, and readability**

Front End Engineering Intern · STACKADAPT   Sept 2017 – Dec 2017, Sept 2018 - Dec 2018

- Led the integration of a semi-autonomous customer service platform **improving customer service and reducing operational costs**
- Consolidated authentication for multiple platforms using single-sign-on (SSO) to **make navigation between platforms seamless**
- **Developed reusable components** for the in-house React component library and the product itself **using good API design principles**

Front End Developer · UNIVERSITY OF TORONTO   January 2017 – April 2017

- Performed maintenance on and **added significant features to Cytoscape**, a widely-used JavaScript **graph theory visualisation library**
- Investigated how researchers use biological pathway information with the goal of **bridging the gap between the data and its users**
- Designed Pathway Search, an open-source web application which **makes the Pathway Commons biological pathways database searchable and viewable** for biologists and researchers, using the React ecosystem
- Developed, tested, and released the pathway-commons JavaScript library on NPM to **ease and optimize Pathway Commons queries**

Full Stack Developer · PEEKAPAK INC.   May 2016 – August 2016

- Redesigned the architecture of Peekapak's site front-end using React and Bootstrap, **increasing code reliability and maintainability**
- Rebuilt the way browser-side code interacts with the REST interface, **reducing load times from 3 seconds to 0.5 seconds on average**
- Created a fully functioning REST interface to **handle billing transactions using the polyglot Vert.x framework** with Java and Javascript

Web Developer Intern · ROGERS COMMUNICATIONS INC.   September 2015 – December 2015

- Created an athlete headshot processing tool which allows images to be validated **eight times more efficiently and more accurately**
- Devised a WordPress caching fail-safe that **reduces site downtime twelve fold** in the event the back-end query servers go offline

Junior System Analyst · TEKVISION TECHNOLOGIES INC.   January 2015 – May 2015

Projects

UWAFT Vehicle HMI System

- **Built a modular interface framework** for the UWAFT Chevrolet Blazer Competition Vehicle to serve all current and future connected autonomous vehicle applications **without compromising driver safety and cabin refinement**
- Wrote interface specifications for both data and interface applications to **encourage modularity and reduce implementation costs**
- Designed and developed interface applications including an instrument cluster with ThreeJS using **human factors engineering principles**

More found on Github...

Education

Systems Design Engineering (BASc) · UNIVERSITY OF WATERLOO - 2020
Economics (Minor) · UNIVERSITY OF WATERLOO - 2020