James Liu

Jamesliu.ca

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SKILLS

Programming Languages
JavaScript, C#, Python, Java, C, C++, ARM and NEON (SISD/SIMD) Assembly

Web Development
Node.js, AngularJS and other frameworks, HTML5, CSS3, Apache, Nginx, Less, Sass, Ruby on Rails

Mobile Development
Android, Xamarin

Databases
MySQL, PostgreSQL, MongoDB

Other
Fluent with Windows, Mac OS X and Linux
Git, SVN, Bower, Grunt, Yeoman
Proficient in Mandarin Chinese

TECHNICAL EXPERIENCE

Google Inc. | *Software Engineering Intern*

May 2017 – August 2017

- As an engineer on the Firebase Performance Monitoring team, I implemented a new, patented, interactive chart design for showing distribution densities, calculated from existing quantile-based data.
- Worked closely with designers and statisticians to ensure the charts were statistically accurate, while maintaining a quality user experience
- Worked extensively with AngularJS, D3, and several proprietary Google engineering tools.

Yelp, Inc. | *Software Engineer Intern*

January 2017 – April 2017

- As part of the Growth team, I was responsible for developing features to drive app downloads and user engagement.
- Directly drove hundreds of thousands of pageviews and thousands of app installs per month.
- Worked on a site feature that allows users to send a business page from their computer to their phone via SMS.
- Implemented many features relating to check-in offers on the desktop site, including search result annotations, visibility on the business page, and sending offers to a phone.

TECHNICAL EXPERIENCE continued

Microsoft Corporation | *Software Developer Intern*

May 2016 – August 2016

- Participated in the Garage Internship Program, an intensive 4-month session focused on building new and innovative software in teams composed entirely of interns.
- Worked closely with the Office team to develop a new feature in a core application.
- Primary developer on the real-time backend, built with Node.js and utilizing Socket.IO and SOAP network interfaces, as well as the consumer-facing app, developed with Angular 2.
- Developed an Android app in partnership with the City of Vancouver to promote public art around the city, primarily using C# and Xamarin.

Broadcom Corporation | *Application Software Engineer Intern*

May 2015 – December 2015

- Developed a patch creation program from scratch for use in new firmware releases.
- Created a YUV video convertor in ARM and NEON assembly and later integrated it with the Android OS source code, allowing the devices to transcode raw 1080p video in real-time.
- Developed internal tools to generate test patterns, raw video, and audio from scratch in C.
- Used WebRTC native code to implement audio encoding in a VOIP audio test application

University of British Columbia | *Undergraduate Teaching Assistant*

August 2014 – Present

- Taught over 150 students in weekly tutorials, in addition to designing, maintaining and ensuring tutorial content was up to date with the current course material.
- Helped to answer students' questions online, and in person during office hours, in addition to grading exams, assignments, and online quizzes.

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PERSONAL PROJECTS

SaferSurrey | *jQuery, Google Maps API, Python*
November 2016 | safersurrey.com
- 1st place winner at the 2016 Telus/IEEE Datathon.
- Developed a machine learning model that took public crime, business, and streetlight data as well as factors like time and weather to determine the safest walking path in Surrey.
- Created a secondary view for law enforcement to analyze and predict the likelihood of crimes occurring using their existing data, and allowed filtering by crime type, date, time, and location.

tgt.hr | *Node.js, Socket.io, jQuery, Microsoft Azure, HTML5, CSS3, YouTube API*
October 2015
- 2nd place winner for Best Overall Use of Microsoft Tech at Dubhacks 2015
- Implemented the real-time backend Node.js server, responsible for managing rooms, chats, video synchronization and video queues.
- Helped fix bugs and add UI elements in the front end using vanilla JavaScript and jQuery.

Trove | *Node.js, MongoDB, Express, jQuery, Semantic UI*
April 2015 – June 2015
- Developed a web-based experiment for the Department of Psychology at the University of British Columbia, allowing for a customizable, timed experiment with imagery and hints.
- Created a secure login system to ensure only authorized participants could access the experiment, and a secure admin panel to change questions, add users, and adjust text.
- Worked closely with client to ensure timely delivery and features were created as specified.

SimpleBus | *AngularJS, Flask, Translink API, HTML5*
November 2014 | jamesliu.ca/simplebus
- Developed a client-side web app that simply tells you how long until your bus arrives with AngularJS that fetches bus information from Translink (the local transit authority), stores user settings locally using the HTML5 Local Storage API, all in a customizable and draggable interface.
- Created a "forwarding" server to work around incorrectly configured CORS headers in the Translink API.

EDUCATION

University of British Columbia, Vancouver, BC
Bachelor of Science, Computer Science
September 2013 – Present
4.30 GPA in computer science courses
3.90 GPA overall
University Transition Program, Vancouver, BC
Dogwood Diploma, Class of 2013
A program that prepares 13-15 year olds for early entrance to university by condensing a 5-year high school course load into an intensive, rigorous 2-year curriculum.

ACADEMIC PROJECTS

TrafficBuddy | *Ruby on Rails, jQuery, MySQL, Redis, Google Maps API, HTML5*
February 2015 – April 2015
- Responsibilities include creating a front-end based on jQuery to display maps, traffic information, as well as obtain the user's location with the HTML5 Geolocation API or Google Maps.
- Worked with City of Vancouver traffic cameras to display live imagery on the map.
- Helped with back-end functions such as parsing City of Vancouver RSS feeds and user authentication.

OTHER EXPERIENCE

University Transition Program | *Computer Science Instructor*
March 2014 – July 2014
- Taught a class of about 15 gifted students, developing the course website, working closely with the Vancouver School Board to develop the curriculum and exercises, based on the UBC CPSC 110 course material.

BronyCAN | *Web Developer*
October 2013 – Present | bronycan.ca
- Developed a brand-new WordPress theme to replace the static HTML pages that were used the previous year, which was used as a gateway for registration, hotel booking, and information for over 1000 attendees.

Restart! Comic/2P reSTART! | *Co-founder, Lead Developer*
May 2010 – October 2012
- Operated a weekly online webcomic with a team of three others from the United States, which amassed over 125 thousand pageviews, and was nominated for a spot on Kotaku's weekly webcomic feature, Sunday Comics.