

Billy Liu

SOFTWARE ENGINEER · COMPUTER SCIENCE & STATISTICS GRADUATE

+1 (206) 861-5318 | billywzliu@outlook.com | www.billyliu.ca | billywzliu | billywzliu

Experience

Software Engineer - Intern

Seattle, WA

NORDSTROM

Jun. 2018 - Present

- Full-stack development of enterprise-wide web application used for data-driven decision making
- Create **RESTful APIs** using **Python** with **Django**, connected to **MySQL** databases
- Design and implement responsive web **UI** components and pages using **JavaScript** with **Angular**
- Implement automated end-to-end test suite using **Python** with **Selenium**
- Data streaming and management using **AWS Redshift**, **Apache Airflow**, and **Apache Kafka**
- Create prototype self-checkout service using **RFID** hardware, **JavaScript** with **React**, **MongoDB**, and mobile payment technologies; deployed using **Docker** on **AWS ECS**
- Participate in gathering user requirements, code-reviews, daily scrum, and sprint meetings

Software Developer - Contractor

Vancouver, BC

SCANTECH eFORMS

May. 2017 - Dec. 2017

- Improve functionality, stability, and **UI/UX** of an enterprise application for financial advisors to automate completion of PDF forms using **C#**, **.NET**, with **WPF**
- Expand capabilities of **SQL** and **Access** databases to handle more client information and options
- Implement Google Chrome extension to parse client data and create PDF files using **JavaScript** with **Electron**, **HTML5**, and **CSS**
- Implement and deployed an internal PDF form versioning system using **Python** and **PowerShell**
- Participate in software design and code-review sessions

Software Developer - Co-op

Vancouver, BC

ANALYSISWORKS

May. 2016 - Dec. 2016

- Designed and built web application modules to visualize real-time health-care data using **JavaScript** with **jQuery**, **HTML5**, and **CSS**
- Implemented application back end with **C#**, **.NET**, **ASP.NET**, and **LINQ** using the **MVC** design pattern
- Implemented and maintained multiple **SQL** databases with **stored procedures** in **SQL Server**
- Built and deployed tools to automate database uploads and check for data integrity using **Python** and **PowerShell** with **Selenium**
- Implemented **predictive algorithms** to forecast day-to-day hospital bed usage
- Actively participated in daily **scrum** and utilized **Git** in an **agile** development team
- Engaged in code-review sessions, maintained development backlog, and wrote version logs
- Worked closely with consultants, analysts, and management in a deadline-driven environment

Projects

Zombified

Video Game Programming

DEVELOPER, PRODUCT MANAGER & DESIGNER

Jan. 2018 - Apr. 2018

- 2D multi-player Battle Royale game for **Mac** and **Windows**, built using **C++** with **OpenGL** and **GLFW**
- Implemented vertex and fragment **shaders** using **GLSL** to render sprites, lighting effects, and animations
- Applied **linear algebra** techniques such as matrix transformations to translate, scale, and rotate in-game entities
- Implemented **artificial intelligence** in the form of **A-Star path-finding** to create realistic trajectories for homing missiles

Study Buddy

LumoHacks

DEVELOPER & DESIGNER

Sept. 2017 - Oct. 2017

- iOS** and **Android** application to connect students into study groups, built using **Swift** and **Java**
- Implemented back end using **Firebase**, used authentication, persistent data storage, and device GPS coordinates

Skills

Programming Python, JavaScript, C#, C/C++, Java, R, SQL, Erlang, HTML5, CSS

Technologies AWS, Git, Node.js, NPM, Selenium, Docker, Kubernetes, Jenkins, MySQL, MongoDB, IIS, Apache, CUDA, OpenGL

Education

University of British Columbia

Vancouver, BC

B.S. IN COMPUTER SCIENCE AND STATISTICS (CO-OP PROGRAM)

May. 2018