

# Jake Xia

## CONTACT

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## SKILLS

### Languages

- C++, C, Java
- Swift
- Python
- SQL/NoSQL databases
- Javascript
- HTML5, CSS, DOM
- Bash Scripting

### Tools

- Node.js + Express
- Angular.js
- Firebase
- XCode
- AutoCAD, SolidWorks
- Adobe Design Suite
- laser cutting, 3D printing

## EDUCATION

University of Waterloo  
Candidate for B.ASc,  
Mechatronics Eng.  
2018 – 2023

## INTERESTS

Robotics, 3D Modelling,  
Product Design,  
iOS Development,  
Preventing Climate  
Change, Indoor  
Gardening, Photography

## AWARDS

Ontario Volunteer Service  
Award 2018, Young  
Photographer of the Year  
Top 5 / 754 photographers

## EXPERIENCE

**WEB DEVELOPER** @ University Health Network, HPC and Bioinformatics Core  
Toronto, ON | May 2019 – August 2019

- Lead a design team to create a bespoke front-end web framework accessible by CDN that is being adopted by all UHN research facilities.
- Improved information architecture and UI/UX by rebuilding 6 core websites
- Verified designs were effective through user-testing and design reviews
- Prototyped a firebase web app that improves hospital waiting rooms by giving patients real time updates about their journey in the queue and live wait-times
- Built a user database with Node.js + MySQL as well as a ReST API that sends and receives data using JSON

**LEAD DESIGNER / ENGINEER** @ Trubotics (VEX Robotics Team)

Pierre Elliott Trudeau High School | March 2016 – June 2018

- Designed, built, and programmed 5+ competitive robots iteratively and progressed to VEX Provincials as top 15% of all regional teams
- Automated functions of robots using a system of sensors and encoders, speeding up manual operations and enabling a short self-driving mode
- Pitched project to stakeholders, successfully secured club funding of \$5000

**MEDIA LEAD** @ Asian Liver Centre Stanford University

Peking University, Beijing | June – August 2017

- Collaborated with the Centre for Disease Control in China to devise an effective means of visually conveying the dangers of Hepatitis B
- Created content using various forms of media to convey the dangers of Hep B and fight stigma, viewed by millions of Chinese citizens
- Communicated frequently with team and swiftly incorporated feedback

## PROJECTS

**EXPENSE MANAGING APP FOR WEB / iOS** | Ongoing

- Cloud app that allows users to analyze spending habits. Shows tendencies, breakdowns, and insights through an intuitive dashboard backed by firebase

**PHARMACEUTICAL DRUG SEARCH ENGINE** | Hack the North 2019

- Web-app for kickstarting the drug development process by predicting the likeness a drug is to succeed, reducing the need for background research

**ARKIT FACE TRACKING STICKERS** | Ongoing

- iOS app that superimposes stickers onto a face, Snapchat style, using ARKit

**3D PRINTED MODULAR WATER BOTTLE** | Ongoing

- Prototyping a modular water bottle with interchangeable, screw-on compartments including a filter, ice-core, and tea/fruit infuser

**IMAGE PROCESSING + PLOTTER** | November 2019

- Developed image processing software to convert coloured images into dithered greyscale photos using Processing graphical library
- Designed and programmed a bi-axial plotter to print the grey-scaled photo