YAN KE

Software Engineering at University of Waterloo

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Skills

- Proficient with **Java**, **Python**, **C/C++**, **JavaScript, Scala**, **HTML / CSS** and **SQL**
- Experience with web / mobile frameworks: **Android**, **ReactJS**, and **Flask**
- Familiar with tools including **Git**, **GDB**, **Jira**, **Unix**, **Latex** and **Photoshop**

Experience

Aterica Digital Health – Software Engineering Intern

May 2017 – Aug 2017
Waterloo, Ontario

- Developed and maintained new Bluetooth, UI and Networking features for our **Android** app
- Improved development workflow by creating test management tools, database scripts and data visualization platform using **Python** and **ReactJS**
- Optimized our custom **Android** Bluetooth stack, increasing Bluetooth stability and reducing latency with our hardware
- Implemented support for new mobile features in our **Java** infrastructure
- Involved in feature / UI designs; produced code in a test-driven and agile environment

BioMechatronics Student Design Team – Developer

Sept 2016 – Present
Waterloo, Ontario

- Developed processing filters in **C++** for biomedical signals from myoelectric sensors
- Trained a linear classifier for Raspberry Pi to control a robotic hand using **Python**

Projects

See more at itsyan.me/#portfolio

ScavengerHunt

- Designed a web, Android and server application to host large-scale scavenger hunts
- Deployed **Flask** server to **Heroku** that handles socket and API requests
- Developed **Android** app connecting players to scavenger hunt games hosted on the server and tracking their progresses, utilized Cloudinary and Google Maps API
- Created an interface for setting up and tracking games using **ReactJS**

EasyPassword

- Developed a password management application using facial recognition
- Implemented cryptographic hash and symmetric encryption using **OpenSSL**
- Using **OpenCV** to implement eigenface facial recognition in **C++**

Spoilers Suck!

- Created a Chrome extension in **JavaScript** that traverses the DOM tree, makes RESTful calls to the server and filters out *Game of Thrones* spoilers
- Architected backend APIs using **Python** / **Flask** to predict if a text or image is a spoiler

APPC Wind Tunnel

- Constructed a wind tunnel to measure aerodynamic forces on 3-D printed airfoils
- Integrated **Arduino** microcontroller with **Matlab** to create GUI
- Designed wind tunnel frame in **AutoCAD**, interfaced sensors to calculate various forces

Education

University of Waterloo

Sept 2016 – Present

- Candidate for Bachelor of Software Engineering, expected graduation in 2021
- 96% cumulative average, **first in class** for Fall 2016 and Winter 2017 term

Interests

- Hopeful side owner of a small café in the near future
- Cooking, Judo, badminton, trying out new tea and coffees