

# jeffreyyxiao

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## Experience

### **datacoral Inc**

**San Francisco, California**

*Software Engineering Intern*

Jan 2018 – Apr 2018

- Scoped out, architected, and implemented highly scalable materialized views in Redshift using Kinesis Data Streams, DynamoDB, and Lambda.
- Applied the concept of timelabel tags to represent the state of the underlying data, deterministically update materialized views when all dependencies get updated, and to version schedule and view definition changes.
- Developed critical APIs and migration scripts for monitoring webapp launch.

### **Yelp**

**San Francisco, California**

*Software Engineering Intern*

May 2017 – Sep 2017

- Modernized build pipeline and built tooling to migrate services from Google Closure Library to ES6 and Webpack, and from npm to yarn.
- Explored and evaluated solutions for better client-side JS error reporting.
- Implemented and rolled out infrastructure to process over 25 million errors every month to over 20 services.
- Helped develop infrastructure and tooling to migrate services to React, including server-side rendering of React components.

### **Ivy Global**

**Toronto, Ontario**

*Software Engineering Intern*

Nov 2015 – Sep 2016

- Developed an ASP web application that displays SAT scores and statistics for mock exams in real-time.
- Led the development of a bubblesheet marker using .NET, convolutional neural networks, and custom image processing algorithms to process blurred, tilted, and imprecise images.

## Projects

### **kademlia-dht-rs**

**Personal Project**

[github.com/jeffrey-xiao/kademlia-dht-rs](https://github.com/jeffrey-xiao/kademlia-dht-rs)

Rust, Distributed Systems

- A flexible implementation of the Kademlia distributed hash table.
- Used strict parallelism to efficiently send RPCs to probe nearby nodes.

### **inSight**

**Greylock Hackfest**

[goo.gl/Qy4TcJ](https://goo.gl/Qy4TcJ)

Python, C++, Unity, TensorFlow

- Fully interactive AR headset that uses machine learning and custom image analysis algorithms to display information about the user's point of focus.
- Applied gaze tracking to enable full control of headset via eye movement.
- Used Bing and IoT technology to control home appliances and learn about surroundings in an intuitive way.

### **Emergicare**

**Hack the North**

[devpost.com/software/emergicare-hsup49](https://devpost.com/software/emergicare-hsup49)

Node, React, Android

- Android background service that sends optimized GPS and network locations by text to a specified number every time 911 is called.
- Built an operator dashboard that supports routing of emergency vehicles simulated by the Grand River Transit system.
- **Related News:** [goo.gl/S5u1vr](https://goo.gl/S5u1vr)

## Skills

### **Proficient**

Java // C // C++ // C# // Rust  
Python // JavaScript // React // Node  
Git // Linux

### **Prior Experience**

Bash // Go // Scala

### **Academically Exposed**

R // MATLAB // Octave // Assembly

## Awards

- First, Greylock Hackfest // 2017
- Second, MIT Battlecode // 2017
- Fourth, ACM ICPC East Central North American Regionals // 2016
- Bronze, International Olympiad in Informatics // 2016
- Gold, Canadian Computing Olympiad // 2016
- Silver, Canadian Computing Olympiad // 2015
- Platinum Division, USA Computing Olympiad // 2015

## Certifications

- Certified Java SE 6 Programmer
- Algorithms I & II, *Princeton*
- Algorithms I & II, *Stanford*
- Machine Learning, *Stanford*
- R Programming, *Microsoft & JHU*

## Education

### **University of Waterloo**

**Bachelor of Software Engineering**

2016 – 2021 // Waterloo, Canada

- 93.15% Cumulative Average
- Dean's Honour List (3 Terms)