

# Zach (Zuqi) Li

Software Engineer | University of Waterloo

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## EXPERIENCE

### Microsoft | Software Engineer

September 2018 - Present | Redmond, WA

C#, Python, TensorFlow, ML.NET, LINQ, MS Cosmos (Data Processing Platform)



- Designed, trained, and integrated a new **autosuggest ranker** for the Chromium-based Edge browser; metrics show **parity** against Chrome autosuggestion
- Designed and built a new service for ranking and serving non-prefix-match suggestions; serves **2500~ QPS per machine** and responds under **50 ms**
- Helped tune and improve the autosuggest relevance of Windows Search Box, legacy Edge, and Bing.com by statistically analyzing query patterns and experimentation

### Microsoft | Software Engineering Intern

September 2017 - December 2017 | Redmond, WA

- Built an **n-gram language model** to predict the next words of incomplete user queries
- Integrated **next word prediction** into **Bing**'s autosuggestion pipeline to show relevant suggestions for uncommon queries; improved overall suggestion coverage by **23%**
- Prototyped a **recurrent neural network (LSTM) language model** to further improve prediction relevance; captures semantic relationships and long-term dependencies

### LinkedIn | Data Infrastructure Intern

January 2017 - April 2017 | Sunnyvale, CA

Java 8, Kafka, MySQL, Ambry



- Helped launch LinkedIn's **media infrastructure** for processing and serving media assets
- Designed, built, and released a distributed **end-to-end validation** and **performance testing** framework for the media processing infrastructure:
  - Handles traffic generation, pipeline monitoring, metrics collection, and data validation
  - Used by media teams for experimentation, analyzing metrics, and monitoring for failures

### Yahoo! | Software Engineering Intern

May 2016 - August 2016 | Sunnyvale, CA

ES6, Perl, Node.js, React, Fluxible, MySQL, AWS



- Created and launched **Yahoo! View** (*view.yahoo.com*) as part of the web team; built core UI components and API endpoints
- Integrated **Tumblr** content into Yahoo! View to show relevant official and fan posts
- Setup the entire backend integration testing infrastructure for Yahoo! View

## PROJECTS

### KSwap | Node.js, React, Redux, Firebase

December 2018 - Present

A web platform where music enthusiasts can trade and resale albums and merchandise

### LUQL | Node.js, React-Native, MobX, Firebase

January 2017 - September 2017

An iOS platform to help locals create and guide tours for travellers, tourists, and adventurers

### MelonWatch | C++, OpenGL, OpenAL

August 2017

An 3D OpenGL FPS; built the entire game engine from scratch featuring dynamic shadow mapping, a particle system, and a physics engine

## SKILLS

### Languages

- JavaScript
- Python
- Java
- C#
- Scala
- C++
- C
- HTML / CSS
- ARM Assembly

### Frameworks

- TensorFlow
- React / React Native
- Redux
- Angular
- Express
- Less / Sass
- OpenGL
- Android SDK

### Databases

- MySQL
- PostgreSQL
- MongoDB

### Tools

- Spark
- Hadoop
- Kafka
- Node.js
- Firebase
- Git
- Maven
- Jupyter Notebook

## EDUCATION

### University of Waterloo

Bachelor of Software Engineering  
Sept. 2013 - April. 2018

## INTERESTS

- Build apps
- Make music
- Catch pokémon