

# Zach (Zuqi) Li

Software Engineer | University of Waterloo

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## EXPERIENCE

### Microsoft | Software Engineer

Sept 2018 - Present (Prev. Sept 2017 - Dec 2017) | Redmond, WA

C#, Python, TypeScript, TensorFlow, MS Azure, ML.NET, LINQ



- Designed, trained, and integrated a new **autosuggest ranker** for the release of the Chromium-based Edge browser; metrics show **parity** against Chrome autosuggest
- Built and deployed an Azure microservice for serving non-prefix-match autosuggestions; handles **~2,500 QPS** per instance and has a 99.9th percentile latency of **~15 ms**
- Built an **n-gram** and a **recurrent neural network language model** to predict the next words of incomplete user queries
  - Integrated **next word prediction** into Bing's autosuggest pipeline to show relevant suggestions for uncommon queries; improved overall suggestion coverage by **~20%**
- Helped tune and improve the autosuggest relevance of Windows Search Box, Edge, and Bing.com through analyzing user patterns and experimentation

### LinkedIn | Data Infrastructure Intern

Jan 2017 - Apr 2017 | Sunnyvale, CA

Java, 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 scheduling, traffic generation, metrics collection, data validation, and alerting
  - Automates customizable tests and used for experiments and failure monitoring

### Yahoo! | Software Engineering Intern

May 2016 - Aug 2016 | Sunnyvale, CA

Node.js, React, Fluxible, MySQL, AWS



- Created and launched **Yahoo! View** ([view.yahoo.com](http://view.yahoo.com)) as part of the web team; served **thousands** of TV shows and movies
- Built core React components, backend APIs, and integrated **Tumblr** content into Yahoo! View to show relevant official and fan posts
- Setup the entire backend integration testing infrastructure for Yahoo! View

## PROJECTS

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

Dec 2018 - Present

A platform for K-Pop enthusiasts to trade and resale their albums/posters/merch; received **thousands** of pageviews and **hundreds** of concurrent active users during the KCON LA event

### K-Pop Discord Utility Bots | Node.js, Firebase, Discord API

Aug 2018 - Present

Discord chatbots that: sort media into respective channels; store GIFs into DB for reactions; and report daily K-Pop news scraped from various sites. Used by **multiple K-Pop servers**

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

Jan 2017 - Sept 2017

A mobile platform for locals and tourists to post, discover, and book tours around their area

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

Aug 2017

A 3D OpenGL first-person shooter; built completely from scratch featuring dynamic shadow mapping, particle system, and physics engine

## SKILLS

### Languages

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

### Frameworks

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

### Databases

- MySQL
- PostgreSQL
- MongoDB

### Tools

- Spark
- AWS
- Microsoft Azure
- Node.js
- Docker
- Firebase
- Hadoop
- Jupyter Notebook
- Git

## EDUCATION

### University of Waterloo

Bachelor of Software Engineering

Sept 2013 - Apr 2018

## INTERESTS

- Build apps
- Create music
- Catch pokémon