

# Zach (Zuqi) Li

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## EXPERIENCE

**Microsoft** | Software Engineer - Autosuggest Relevance

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

C#, Python, Scala, Spark, Azure Data Factory, ML.NET, TensorFlow



- Developed a classifier for suppressing bad autosuggest and implemented **suggestion-type ranking** using the classifier and data-driven heuristics; Achieved F1-score of **0.91**
- Developed a new **autosuggest ranker** for the release of the Chromium-based Edge browser using a regression model; side-by-side metrics showed **parity** against Chrome autosuggest
- Built and deployed an Azure microservice for serving all non-prefix-match autosuggest; handles **~2,500 QPS** per instance and has a 99th percentile latency of **~20 ms**
- Developed an **n-gram** and an **RNN** language model for predicting the next words of user queries; improved user engagement by increasing the autosuggest coverage by **~20%**
- Maintained data pipelines and tuned the relevance of Windows Search Box, Edge, and Bing.com autosuggest through analyzing query patterns and experimentation

**LinkedIn** | Data Infrastructure Intern - Media Infrastructure

Jan 2017 - Apr 2017 | Sunnyvale, CA

Java, Kafka, MySQL, Ambry



- Helped launch LinkedIn's **media infrastructure** for processing and serving all media assets
- Designed, built, and released a distributed **end-to-end validation** and **performance testing** service for the media processing infrastructure
  - Handles scheduling, traffic generation, metrics collection, data validation, and alerting
  - Used for experimentation, automating customizable tests, and failure monitoring

**Yahoo!** | Software Engineering Intern - Yahoo! View

May 2016 - Aug 2016 | Sunnyvale, CA

Node.js, React, Fluxible, MySQL, AWS



- Created and launched **Yahoo! View** ([view.yahoo.com](http://view.yahoo.com)) from scratch 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 functional testing infrastructure and tests for Yahoo! View

## PROJECTS

**KaeSwap** | Website | Next.js, Apollo GraphQL, Flask, Postgres, AWS S3, Docker 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

**Discord Helper Bots** | Node.js Client | Node.js, Firebase, Discord API Aug 2018 - Present

Chatbots that power **additional functionalities** on top of Discord servers: custom emoji/gif and sticker reactions, media sorting and archiving, lyrics/YouTube scraper, and logging

**LUQL** | iOS App | 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** | OpenGL App | 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++
- Scala
- SQL
- HTML / CSS

### Frameworks

#### > Web

- React
- Apollo GraphQL
- Express
- Flask
- Redux
- MobX
- Angular

#### > Data

- Spark
- ML.NET
- TensorFlow
- Hadoop

#### > Application

- React Native
- Android SDK
- .NET
- OpenGL

### Databases

- PostgreSQL
- MySQL
- MongoDB

### Tools

- Node.js
- AWS
- Microsoft Azure
- Firebase
- Docker
- Jupyter
- Git

## EDUCATION

**University of Waterloo**

Bachelor of Software Engineering

Sept 2013 - Apr 2018