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 Infastructure
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)* 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