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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, TypeScript



- Developed a classifier for suppressing bad autosuggest and implemented **suggestion type ranking** using the classifier with data-driven heuristics; Achieved an F1-score of **0.91**
- Developed the core **autosuggest ranker** 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 Web

May 2016 - Aug 2016 | Sunnyvale, CA

Node.js, React, Fluxible, MySQL, AWS, Chai, Mocha



- Developed and launched **Yahoo! View** entirely within a strict timeline of 2 months as part of the web team; served **thousands** of TV shows and movies
- Built main React components conforming to UX design standards, backend business logic + APIs, and the functional testing infrastructure + tests for Yahoo! View
- Integrated **Tumblr** content into Yahoo! View to show relevant official and fan posts

PROJECTS

KaeSwap | Website | Next.js, Apollo GQL, Flask, Postgres, AWS S3, Docker Dec 2018 - Present

A platform for fans 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