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EXPERIENCE

Microsoft | Software Engineer II @Shop|Autosuggest Relevance

Sept 2018 - Oct 2021 | Redmond, WA (Intern @ Sept 2017 - Dec 2017)

C#, Python, Scala, Spark, Azure, ML.NET, TensorFlow, Databricks, TypeScript



- Led development of **Shopping Newsletters** and architected the entire pipeline for sending personalized emails; targets millions of shoppers weekly and greatly improves engagement
- Created **Shopping Recommendation** service to power all product recommendations and the **infinite feed**, providing hundreds of personalized offers to users across Microsoft apps
- Developed on **Bing for Commerce** to support intelligent autosuggest for retailers and **D365**
- Built and applied classifier to identify and suppress irrelevant Bing suggestions given context; achieved an F1-score of **0.91** and significantly reduced defect-rate
- Engineered service for serving non-prefix-match autosuggest to en-US and international markets; expanded autosuggest coverage and serves **~1,600 QPS** per instance
- Created the **autosuggest ranker** for the Chromium Edge browser using regression trees; provides relevance ranking for server-side suggestions against local browser suggestions
- Prototyped and productionized **n-gram/RNN** language models for next word prediction; increased autosuggest coverage by **~20%** and improved user engagement

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 digital assets
- Designed and delivered a distributed **end-to-end validation/performance testing** platform
 - Supports traffic generation, metrics collection, data validation, scheduling, and alerting
 - Used for experimentation, failure monitoring, and automating customizable E2E tests

Yahoo! | Software Engineering Intern @Yahoo! View

May 2016 - Aug 2016 | Sunnyvale, CA

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



- Created **Yahoo! View** as part of the web team; hosted **thousands** of TV shows and movies
- Implemented search functionalities into Yahoo! View using **AWS CloudSearch**, built interactive components and business logic, and set-up automated functional/unit tests
- 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 - Jan 2021

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

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 Game | C++, OpenGL, OpenAL

Aug 2017

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

SKILLS

Languages

- Python
- Java
- C#
- C++
- JavaScript
- SQL
- Scala
- HTML / CSS

Frameworks

- Web

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

- Data

- Spark
- ML.NET
- TensorFlow
- Hadoop

- Application

- React Native
- Unity
- Android SDK
- .NET
- OpenGL

Databases

- PostgreSQL
- MySQL
- MongoDB

Tools

- Node.js
- AWS
- Microsoft Azure
- Firebase
- Docker
- Git / SVN
- Jupyter
- Vim

EDUCATION

University of Waterloo

Bachelor of Software Engineering

Sept 2013 - Apr 2018