

Brian Thompson

SOFTWARE DEVELOPER ENGINEER · MASTERS IN COMPUTER SCIENCE

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Work Experience

Amazon

Seattle, WA

SOFTWARE DEVELOPER ENGINEER 2 ON AMAZON BUSINESS PERSONALIZATION

July 2018 - PRESENT

- Designed, implemented and ran 20 A/B experiments creating new recommenders or modifying existing ones. Resulted in an increase of \$240 million annualized order purchase sales (OPS)
- Implemented daily builds in python which compute item-to-item similarities datasets to be used in discount and bulk recommenders
- Migrated front-end rendering of our teams recommenders to new platform built on TypeScript and Kata (html templating language)
- Created a daily build which computes discounted best sellers using various AWS technologies such as EMR, SNS, SQS and S3
- Implemented a community detection algorithm in python which performs graph clustering on our item-to-item purchase similarities graph

Ag-Sensus, LLC

Champaign, IL

iOS DEVELOPER FOR DJI DRONE AGRICULTURE SOLUTIONS

Oct. 2016 - May 2018

- Computed waypoints given a field boundary that guides the drone through flight while it takes measurements
- Wrote code in C++ and Swift that measured crop height via LIDAR in a DJI manifold, sent to the iPad and overlaid the height graph on a map
- Designed and implemented a user interface allowing farmers to analyze past flight data from multiple fields

The Boeing Company

St. Louis, MO

SOFTWARE ENGINEER INTERN ON THE F-15 TRAINING SYSTEMS AND SERVICES TEAM

May 2016 - Feb. 2019

- Modified and enhanced F-15 3D model with Blender and imported into X-Plane to be used with the F-15 Trainer
- Rewrote X-Plane plugin written in C++ to receive standardized network packets created by Boeing instead of custom messages

Education

University of Illinois

Urbana-Champaign

BS-MCS IN COMPUTER SCIENCE

Aug. 2013 - May. 2018

- Computer Science student in the College of Engineering
- Undergrad GPA: 3.83, Graduate GPA: 4.00

Projects

Line Times iOS App

[HTTPS://GITHUB.COM/BRIANRT/LINE-TIMES](https://github.com/brianrt/line-times)

- Created iOS app which used crowdsourced entries to display wait times at restaurants and bars on UIUC campus
- Completed app and released to App Store

CEO Hunter Chrome Extension

[HTTPS://GITHUB.COM/BRIANRT/CEO-HUNTER](https://github.com/brianrt/ceo-hunter)

- Created Chrome extension that allows user to retrieve the CEO and their email from a company's website, had 700+ users.
- Used javascript to scrape multiple sites to retrieve CEO, and generated likely email using mailbox layer

Text to Buzz

[HTTPS://GITHUB.COM/BRIANRT/TEXT-TO-BUZZ](https://github.com/brianrt/text-to-buzz)

- Created an iOS app which was connected via Bluetooth to a Neosensory Buzz (wrist band with four controllable motors)
- Converted sentences to a sequence of phonemes, and mapped these phonemes to distinct vibrational textures on the Buzz
- Goal was to train myself to understand sentences through vibrations on the Buzz

Visaural

[HTTPS://GITHUB.COM/BRIANRT/VISAURAL](https://github.com/brianrt/visaural)

- Created an iOS app which takes frames from a video and converts to a distinct sound using spectrograms
- Converted RGB frames to lower resolution, grayscale images using matrix operations and Accelerate framework
- Computed spectrogram and played audio using AVAudioEngine framework
- Goal was to train myself to "see" what my camera was seeing through an audio signal

Skills

Programming Java; Python; Swift; React; TypeScript; JavaScript; C++; C;