

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

- Implemented and ran 27 A/B experiments throughout the website for Business customers.
- Total experiment wins resulted in an increase of \$430 million annualized order purchase sales (OPS)
- Migrated front-end rendering of team's recommenders to new platform built on TypeScript and Kata (html templating language)
- Tech lead for improving pricing discovery for business discount programs throughout the site
- Led work streams for wholesale theme for AB Personalization roadmap throughout 2021 and 2022
- Coordinated all personalization efforts for 2022 Small Business week event world-wide. Event drove \$485MM in OPS
- Created first Sponsored Products + organic recommendation blend with business discount programs
- Tech lead for customizing Buy Again Page for Amazon Business customers - 2023
- Built out client and server logic for numerous discount UX features for recommenders on homepage, detail page and buy again page
- Built out product-to-product similarities datasets via python and SQL which power our recommenders
- Implemented a community detection algorithm in python which performs graph clustering on our item-to-item purchase similarities graph
- Created a daily build which computes discounted best sellers using various AWS technologies such as EMR (Java), SNS, SQS and S3
- Maintain operational health of our team's dataset builds and remote strategy service, which serves recommendations for Business customers

Ag-Sensus, LLC

Champaign, IL

IOS DEVELOPER FOR DJI DRONE AGRICULTURE SOLUTIONS

Oct. 2016 - May 2018

- Computed waypoints given a field boundary that guide 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 - Aug. 2016

- 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

PROGRAMMER ANALYST ON THE SHOP FLOOR TEAM

May 2015 - Aug. 2015

- Supported testing team by ensuring functionality of shop floor applications for military aircraft assembly
- Used SQL to query and update an oracle database; added functionality to UNIX shell scripts; created excel macros to generate SQL files

Education

University of Illinois

Urbana-Champaign

BS AND MS IN COMPUTER SCIENCE

Aug. 2013 - May. 2018

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

RELEVANT COURSEWORK

- Core courses: Data Structures & Algorithms, Algorithms and Models of Computation, System Programming, Programming Languages
- Tech electives: Data Mining, A.I., Applied Machine Learning, Communication Networks, Computational Photography, Computer Vision, Virtual Reality, Social Sensing, Interactive Computer Graphics, Data Visualization, Real-time and Cyber-physical Systems

Projects

Sensory Augmentation iOS Apps

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

- Created an iOS app which connects 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 patterns on the Buzz
- Created separate iOS app which takes frames from a video and converts to a distinct sound using spectrograms
- The goal was to train myself to be able to "see" through audio or understand language through vibrational patterns

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
- Used Swift for app and Firebase for user authentication, scheduled jobs and data storage

CEO Hunter Chrome Extension

[HTTPS://GITHUB.COM/BRIANRT/CEO-HUNTER](https://github.com/BrianRT/CEO-Hunter)

- Created Chrome extension that allows users to retrieve the CEO and their email from a provided company, 700+ users.
- Used javascript to scrape multiple sites (Crunchbase, LinkedIn, etc.) to retrieve CEO, and generated likely email using mailbox layer API

Skills

Programming / Tools Java; Python; Swift; React; TypeScript/JavaScript; HTML/CSS; C++; C; Xcode; MATLAB; AWS; Git;