

Brian Thompson

SOFTWARE DEVELOPER ENGINEER · MASTERS IN COMPUTER SCIENCE

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Work Experience

Amazon

Seattle, WA

SR. SOFTWARE DEVELOPER ENGINEER ON AMAZON BUSINESS PERSONALIZATION

July 2018 - PRESENT

- Implemented and ran 28 A/B experiments throughout the shopping website for Amazon Business (AB) customers.
- Total experiment wins resulted in an increase of \$455 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)
- Implemented daily builds computing item similarities and best sellers, processing large amounts of purchase and product data (built using EC2, EMR, SNS, S3 in Python and Java)
- Developed features and maintained operational health of our Remote Strategy Service (Coral service built on Apollo and Amazon Linux 2)
- Introduced a buy again feature offering tiered discounts for past purchases, leveraging parallel asynchronous calls to dynamically update the cart and offer display while minimizing latency impact to the page. Resulted in a \$25MM annual OPS.
- Implemented and migrated queries in SQL and Scala that pull and transform data; used as input to dataset builds and experiment metrics
- Tech lead for wholesale, business discounts, buy again page, and hybrid sponsored + organic recommenders for AB
- Experimentation Bar Raiser for Personalization (Have reviewed over 150 experiments since 2021)

Capless

Chicago, IL

[STARTUP] CHIEF DATA OFFICER

June 2021 - June 2023

- Platform that allows startups to intelligently find investors for funding (<https://capless.ai>), team of three
- Accepted into Product 10X Accelerator (<https://product10x.com/startups/>)
- Applied to Y Combinator Summer 2022 Batch and advanced to interview stage
- Created graph-based algorithm and visualization tool to help find co-investors, using Crunchbase investments data
- Created online platform and built out Feed, Profile, Messaging pages
- Technologies used: React and D3 for front-end and graph visualization, AWS tools like lambda, S3, Amplify, Cognito and CDK for backend

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

Summers of 2015 and 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

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

- Algorithms and Models of Computation, Systems Programming, Data Mining, A.I., Applied Machine Learning, Communication Networks, Computational Photography, Computer Vision, Virtual Reality, Social Sensing, Interactive Computer Graphics, Scientific Visualization, Real-time and Cyber-physical Systems, Embedded Systems

Projects

iOS Apps and Chrome Extensions

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

- **Text to Buzz:** Connects via Bluetooth to a Neosensory Buzz (wrist band with four motors) and maps words to distinct patterns
- **Visaual:** Takes frames from a video and converts to a distinct sound using spectrograms, allowing to "see" through audio
- **Line Times:** App which used crowdsourced entries to display wait times at restaurants and bars on UIUC campus. Swift + Firebase for backend
- **Time to Decide:** App which allows daily tracking and graphing of simple decisions
- **CEO Hunter Chrome Extension:** Allows users to retrieve the CEO and their email from a provided company, 700+ users.

Skills

Languages and Tools Python, Java, Swift, TypeScript, Spark SQL, Ruby, C++, AWS, Firebase, React, D3.js, XCode, Git, CI / CD