Brian Thompson

SOFTWARE DEVELOPER ENGINEER · MASTERS IN COMPUTER SCIENCE

801 S Wells St. APT 103, Chicago, IL, 60607

(630) 209-4756 | bthomp2000@gmail.com | brianrt | brian-thompson-b0281882

Work Experience

Amazon   *Seattle, WA*
SOFTWARE DEVELOPER ENGINEER 2 ON AMAZON BUSINESS PERSONALIZATION   *July 2018 - PRESENT*

- Implemented and ran 20 A/B experiments creating or modifying recommenders.
- Total experiment wins resulted in an increase of $240 million annaulized order purchase sales (OPS)
- Implemented daily builds in python which compute item-to-item similarities datasets to be used in recommenders
- Migrated front-end rendering of team's recommenders to new platform built on TypeScript and Kata (html templating language)
- Implemented a community detection algorithm in python which performs graph clustering on our item-to-item purchase similarites graph
- Created a daily build which computes discounted best sellers using various AWS technologies such as EMR (Java), SNS, SQS and S3
- Expanded our business pricing and deals recommenders across Amazon including on Detail page, Cart, Thank-you page and Your-orders
- Led effort to run experiments recommending bulk items to Amazon Business customers across the site

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 overlayed 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*
BACHELORS AND MASTERS IN COMPUTER SCIENCE   *Aug. 2013 - May. 2018*

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

RELEVANT COURSE WORK

- 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/VISAURAL

- Created an iOS app which connects via Bluetooth to a Neosensory Buzz (wrist band with four controllable motors)
- Converted senteces 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 spectograms
- 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

- 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

- Created Chrome extension that allows user to retrieve the CEO and their email from a provided company, 700+ users.
- Used javascript to scrape multiple sites (Crunchbase, LinkedIn, etc.) to retreive 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;