

Education

Brown University

09/2016 - 05/2020 (expected)

- B.S. Computer Science
- Departmental GPA: 4.0/4.0 | Overall GPA: 3.84/4.00

Relevant Coursework:

- Linear Algebra
- Multivariable Calculus
- Algorithms | Data Structures
- Computer Systems
- Software Engineering
- Creating Modern Web Apps
- Artificial Intelligence
- 3D Game Engines
- Data & Computational Science (Master's)

Experience

Software Engineering Intern @ AlBrain, Inc.

06/18 - 08/18

- Built a Semantic Clustering module for the Memory Graph product using **Keras**, **TensorFlow**, and **Apache Spark**. Implemented to trigger self-reorganization of memory stored in an acyclic graph.
- Implemented the skip-thoughts encoder/decoder model in **Keras** using bidirectional GRU's to produce accurate sentence embeddings.
- Improved upon the Summer City **Unity** demo for fAutonomy by adding a marketplace-driven economy. Trained intelligent NPCs using goal-based planning combined with DNNs to create a competitive lifestyle simulation within the **C++** API.

Undergraduate Teaching Assistant @ CS1410

05/18 - 12/18

- UTA for CS1410: **Artificial Intelligence**; sponsored by Brown's Department of Computer Science.
- Held weekly hours to help students with concepts and debugging; graded assignments, exams.
- Updated HMM assignment by adding I/O testing functionality, visualization, and solution code.

Software Developer @ Salomon Laboratory

06/17 - 09/17

- Wrote **R** and **Python** scripts to parse and perform **ANOVA** analysis on mass spectrometry data which computed normalized heatmaps for phosphoproteomics experiments.
- Upgraded the automated pipeline to use **Andromeda** and **MaxQuant** to improve sequencing depth, used R's **Parallel** library to remove bottlenecks in quantitation caused by the new richer data types.
- Worked with the Peptide Depot relational database to create a GUI for the lab's statistical tools.

Web Developer @ AnyMeal, Inc.

07/13 - 01/14

- Designed a web portal using **Node.js** for restaurant owners to upload and customize their menu's appearance. Experimented with **Node Webkit** to create a desktop version of this portal.
- Implemented a web scraper with text parsing in **Python** to streamline the menu uploading process.
- Worked directly with clients and the developer team to rigorously test the product until release.

Projects

Stuff Going Down - Personalized Global News

03/18 - 05/18

- A world map which updates with live news and social media pins. Content is fully customizable; upvoting content will increase the chances of similar content being displayed.
- Features include: multiple user support, search, grouping densely pinned areas with clusters, displaying heatmaps based on sentiment, dynamic zoom, upvoting & downvoting.

Technology: Java, Spark, JavaScript, HTML/CSS, D3.js, websockets, Google Maps API

Maps - A lightweight implementation of Google Maps in Java

01/18 - 03/18

- Takes data from **OpenStreetMap** to create a GUI which supports navigation, traffic data, and basic functions such as panning, zooming, and searching by name with autocorrect support.
- Uses combination of k-d trees, a dynamic graph structure, and grid-based caching with **HTML canvas**.

Technology: Java, Spark, JavaScript, SQLite3, Canvas

XAMulator - Secure Testing Portal

06/15 - 12/15

- An application designed as a test-taking platform to remove the need for paper tests in school.
- Consists of a web portal for teachers to upload/create tests, along with a desktop application for students to take tests on and view results. Locks the screen during test-taking to prevent cheating.

Technology: Node.js, node-webkit, JavaScript, MySQL, Passport

Java, Python, C, C++, JavaScript, R, SQL, Git, Node.js, React.js, Keras

Skills Misc.

Awards: 2nd Place at Jane Street Electronic Trading Challenge 2018, Moxtra Prize at HackGenY 2015

Activities: Club Ultimate Frisbee, Guitar, Cello, Calligraphy