Olivia Johnson

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EDUCATION

Brown University Providence, RI, Expected Graduation May 2022
B.S. Computer Science (Artificial Intelligence/Machine Learning & Design) G.P.A: 4.0/4.0
Coursework: *Introduction to Software Engineering, Algorithms and Data Structures, Computer Systems, Object-Oriented Programming, Logic For Systems, Discrete Structures and Probability, Statistical Inference, Linear Algebra*

Trinity High School New York City, NY, 2014-2018
Honors: *Cum Laude, Hawley Award (Top 3 students), Olympic Soccer Development Program* G.P.A: 3.95/4.0

PROGRAMMING & WORK EXPERIENCE

Full-Stack Software Engineer Intern, *Strongsuit*.co Remote | Summer 2020-Present
- Built new website features with React, which greatly increased productivity and consistency of employees
- Produced an extensive front-end testing framework for the codebase with the React Testing Library
- Developed comprehensive design plans for major upcoming products and enhanced product management skills

Undergraduate Teaching Assistant, *Brown Computer Science Department* Providence, RI | Fall 2019
- Selected as a UTA for 400+ students in an intro CS course with Prof. Andries van Dam (CSCI 0150)
- Led two labs/sections & four debugging hours each week to assist students with code and complex concepts
- Redesigned 3 labs, updated the Cartoon project, graded 10 assignments each week, and mentored 5 students

Machine Learning Research Intern, *Kriegeskorte Lab at Columbia University* New York City, NY | Summer 2019
- Built 3 versions of a Convolutional Recurrent Neural Network to reconstruct and predict Moving MNIST videos
- Worked to combine unsupervised and recurrent machine learning models using PyTorch & Tensorflow

Hack@Brown Competitor, *Brown University* Providence, RI | Winter 2019, 2020
- Built a website that functioned as a queue-platform, and contributed to both front/back-end development
- Created an iOS game application on Xcode in under 24 hours and taught myself Swift for app development

PROJECTS

FoodCOMA: Recipe Recommendation Web Application — *Java, Javascript, HTML, CSS* | Spring 2020
- Led front-end development and built the website infrastructure with intuitive web design and cookie system
- Set up Login & Signup functionality for users by connecting the front-end interface with backend user database
- Built the skeleton of the recommendation k-d tree algorithm that curated recipes to a user's preferences

tIMDb: Film Database Application — *Java, HTML, CSS* | Spring 2020
- Implemented Dijkstra's graph search algorithm to find the shortest path that connects two actors
- Created a caching system that accessed and stored queried data from SQL film databases via a proxy class
- Built a website to search for connections with unique pages for each film/actor using a dynamic URL structure

Shell — *C* | Fall 2019
- Built a program from scratch that reads & executes user commands, and maintains a job control system
- Parsed input text within a REPL-loop and handles child processes & input/output file redirection
- Kept track of multiple foreground/background job processes with reaping & signal-handling

Convolutional Recurrent Neural Network Model — *Python with PyTorch* | Summer 2019
- Built a model that takes in Moving MNIST videos and predicts future frames using unsupervised learning
- Developed a Variational Autoencoder with Long Short-Term Memory cells in the latent space
- Optimized performance via a present reconstruction penalty and predictive prior distribution in the loss function

SKILLS & INTERESTS

Programming Languages: Python, Java, JavaScript, C, HTML, CSS, MATLAB, Swift, x86 Assembly
Technical: React, Node, MongoDB, SQL, PyTorch, Tensorflow, JQuery, LaTeX Editor, Linux
Clubs: Mentor for Women in Computer Science, STEM Tutor at Hope High School, Brown Club Soccer
Interests: playing soccer, reading dystopian fiction, running in the park, making films, baking 7-layer bars