

# Andrew Zhang

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## EDUCATION

**Tufts University School of Engineering**

Medford, MA

*Bachelor of Science in Computer Science and Mathematics, Minor in Music*

Expected May 2022

GPA: 3.95

Relevant Courses: Algorithms, Intro to Mobile App Dev iOS&Swift, Introduction to Security, Intro to Machine Learning

Data Structures, Machine Structure and Language Programming, OOP Graphical User Interface, Probability, Real Analysis, Abstract Algebra, Linear Algebra, Discrete Mathematics

## TECHNICAL SKILLS

**Languages:** Python, C, C++, React, HTML/CSS, JavaScript, jQuery, Node.js, Java, Swift, SQL, MATLAB

**Software:** VSCode, GitHub, XCode, Jupyter, Sublime, Vim

## EXPERIENCE

**Beacons.ai**, San Francisco, CA, *Intern*

May 2020-August 2020

- Conducted data analysis and full-stack development for a pre-seed stage, 4-person startup company
- Analyzed 1000+ users using SQL, Firebase, and Python to optimize users' product experience
- Published an insightful, data-driven article for users to view: <https://blog.beacons.ai/optimizing-your-links-for-clicks/>
- Implemented an interactive user map with React, Firebase, and the Airtable API

**Massachusetts General Hospital**, Boston, MA, *Intern at Martinos Center for Biomedical Imaging*

July 2019-August 2019

- Engineered programs for data analysis of the human cerebral cortex under collaboration with an interdisciplinary team from Fischl Lab
- Integrated existing code from the Freesurfer open source project to compose versatile programs for such data analysis
- Built code in C++ to cluster neural streamlines based on physical location of the endpoints within the brain's structures
- Compiled visual data in Python to directly compare the information between multiple subjects

## PROJECTS

**Streetlancer**, Co-Founder, CDO

June 2020-Present

- Developed a potential multi-customer platform from inspiration of one small business owner
- Programmed a full-stack application for mobile business users with two collaborators
- Integrated customers' locations with scheduling appointments and completing transactions
- Oversaw the UI/UX component, leading the design for the frontend's wireframe and coding with React

**Grep for Large Word Directories**

May 2019

- Assembled a hash table to store all words from a provided directory in C++
- Processed 100+ large text files of 1M+ lines each with a runtime of 20s (baseline of 10min)

**Sequence Match Check**

March 2019

- Implemented a trie to store DNA sequences in C++
- Coordinated insertions, removals, and searches for specific sequences

**Hack@Brown 2019**

January 2019

- Built 3D 2048 in Java and C++ with three collaborators

**Minesweeper**

November 2018

- Programmed a replica of Minesweeper for Terminal in C++

## ACTIVITIES

**Tufts Symphony/Chamber Orchestra**

Medford, MA

*Violinist/Social Chair Member*

September 2018-Present

**Tufts Chamber Ensembles**

Medford, MA

*Violinist/Violist*

September 2018-Present