

# Anish Roy

(512) 202 0998 • anishroytx01@gmail.com  
https://anishroytx.me • https://github.com/anishroytx01

## Education

### University of Texas at Austin

*Pursuing a BS in Computer Science.*

*(Aug 2019 – Present)*

Relevant Courses: Data Structures (In Progress), Discrete Math (In Progress), Computer Science: Independent Study, Integral and Differential Calculus, Linear Algebra, Multivariable Calculus

## Languages/Skills

In order of expertise: Java, Swift, JavaScript, HTML/CSS, Python, MATLAB

Experience with Git Version Control, Unix and Windows systems, User design, Terminal

## Work Experience

### CTM

*Paid Summer Intern (Swift)*

*June 2018–Aug. 2018*

- Created an iOS application that provides the user information on nearby gas stations displaying gas prices, distance from user location and other data. Calculates optimal fuel station based on an algorithm developed to prioritize variables based on user preference. Electric vehicles have an option for electronic charging stations.
- The app is architected to work with Google Maps and Apple Maps to navigate users to fuel stations.
- Reads live data from OPIS API and Yelp API.
- Received awards from the CIO of the department for entrepreneurship.

*Paid Summer Intern (Python)*

*June 2017–Aug. 2017*

- Expedited process for the municipal courts of Austin by building an interactive chat algorithm that provides interactive answers and suggestions to the public on questions pertaining to the courts.
- Used Twilio and Heroku for the SMS and web-based platform.
- Mined information and data from the municipal courts' websites to feed information into the program.

### Kumon Learning Center

*Tutor and Data Manager*

*Sept. 2016–July 2019*

- Tutored students, elementary through high school, in math and reading
- Managed student data and dealt with parent interaction

## Software Projects

### Stock Market Simulator (Swift)

An iOS application of a paper trading platform for stocks, displaying market data and charts. Used Alpha Vantage API and Swift Charts library to display data for users. The app UI is built reactively so it is able to be used with different devices and allows for resizing.

### Personal Website (HTML/CSS)

Website used to host personal projects and professional resume. Implements static email form handling without the use of a server.

### File Manager (Java)

Application that works like File Explorer in Windows, but with backup capabilities. Uses JavaFX for the GUI and a tree system to store the folders and files. Encrypts files with asymmetric encryption algorithm using SSL protocol with public and private keys.

### Image Compression (MATLAB)

Complex algorithm that performs lossy image compression using singular value decomposition in MATLAB. This technique applied the use of linear algebra and digital image processing. Image compression enables image reconstruction, while also optimizing the storage space

### Dish It Out (Swift)

An iOS application that recommends users dishes at restaurants based on food preferences, dietary restrictions, etc. Partnered with local restaurants to provide discounts and integrate menus into the app.

## Activities

### Texas Convergent (Developer)

Formed group with peers to build an app/service that provides avid runners with music based on their running. The app uses the Core Motion library a cadence formula to calculate rate of motion. Uses HTTP POST and GET requests to Spotify API to perform player functions and sync cloud information. Uses OAuth 2 to authenticate users' Spotify account logins and our server based in Python Flask to perform asynchronous callbacks to our application. There are also offline storage capabilities using User Defaults.