



Education

BS | Computer Science

BA | Japanese

Duke University | 2021

- Major GPA: 4.0
- Cumulative GPA: 3.94

Coursework

Discrete Math for Computer Science

Data Structures and Algorithms

Probability and Statistics

Database Systems

Computer Architecture

Real-world Algorithms

Linear Algebra

Multivariable Calculus

Skills

Coding Languages

Expert

Python, Java, JavaScript

Proficient

Swift, C, C++, HTML/CSS

Tools

Google Tensorflow

Google Firebase

Google Cloud

Unix/Linux

Selenium

Xcode

iOS

Languages

Fluent

Korean • Japanese

Conversational

Spanish

Learning

Chinese

Achievements

Academic

APS Institute Scholarship

Dean's List with Honors

Academic All-American

Athletic

U.S. Archery Record Holder

U.S. Ntl. Archery Champion (2017)

Work Experience

Duke University; Dept. of Computer Sciences | May 2019 - Present

Research and Development Intern

- Ported audio fingerprinting library from Python to JavaScript for a web server and created JavaScript methods that mimic NumPy's functionalities (Real Discrete Fourier Transformation, Stride Tricks)
- Implemented landmark-based audio fingerprinting into FactStream iOS app, enabling it to detect the location of a query audio sample in a database of 10k+ speeches

Duke University; Data Sciences Program | Sept 2018 - May 2019

Undergraduate Researcher

- Leveraged Google's TensorFlow to train a convolutional neural network to identify location of Brachial Plexus nerve bundle
- Researched and developed a 10-layer U-Net Architecture, with Image Augmentation, training on 10k+ images, resulting in 80% accuracy rate

Duke University; Dept. of Computer Sciences | Aug 2018 - May 2019

Undergraduate Teacher Assistant

- Generated CSV reports from Gradescope, containing data from over 200 students' assignments, regrades, and surveys, impacting future course teaching decisions
- Led 2 discussion sections of 30+ students for CS101: *Introduction to Computer Science*

Select Projects

Dice! github.com/mk374/dice

- Developing an iOS app that gives users a randomized itinerary/schedule of a day-trip optimizing location, duration, and finance
- Built Python script that pulls data from Yelp's and Google's API's, regarding restaurants and their respective distance from each other, to populate a MongoDB (NoSQL) database and expose it as a REST API

Ride Organizer github.com/mk374/RiderApp

- Developed a Web Application, using HTML, CSS, and JavaScript (Bootstrap) that utilized Google Firebase(NoSQL) databases to help organize rides/carpools for any group size

Concentration Card Game github.com/mk374/Concentration

- Created an iOS (Swift) pair-matching card game that focuses on Motion-View-Controller frameworks and different iOS View Controllers

Extra-curriculars

Duke Archery Club Co-Founder and President

- Led a team of over 20 members, and ranked 3rd and 9th place at the US National Indoor Championship
- Received a \$5,000 grant from the United States Archery Association and Fivics Archery Corporation for archery equipment