Greater Chicago Area, IL
312-720-8139
sheadx@bc.edu

Aidan Shea

linkedin.com/in/aidan-shea
github.com/aidanshea1

EDUCATION

Boston College **Chestnut Hill, MA**
Morrissey College of Arts and Sciences
Bachelor of Science in Computer Science, Bachelor of Arts in Philosophy Expected May 2022

- Relevant Courses: Data Structures, Algorithms, Machine Learning, Introduction to Machine Learning with Applications to Chemistry, Large Scale Data Processing, Database Design and Implementation, Computer Vision, Swift/iOS App Development, Multivariable Calculus, Linear Algebra, Computer Organization, Computer Systems, Logic & Computation, Randomness & Computation

SKILLS

Languages: Python, SQL, Java, Swift, Scala, Stata

Tools & Libraries: Git, Jupyter Notebook, Numpy, Pandas, Scikit-Learn, Matplotlib, Google Firebase, Excel, PowerPoint

PROJECTS

ASL Fingerspelling Detection and Translation using a Convolutional Neural Network - Uses Scikit-Learn, Keras, Tensor Flow, Numpy, Matplotlib

- Preprocessed 164,500 images using horizontal shifting, vertical shifting, and zooming to a random extent to create more noise within our dataset to help prevent overfitting and then used a k-means approach to hand segmentation
- Tested numerous neural network architectures consisting of varying amounts of convolutional, pooling, and dense layers
- Experimented with batch normalization, dropout, and L2 regularization techniques in order to help prevent overfitting and improve our generalization rate
- Achieved a 97.43% accuracy rate on the testing portion of the dataset which was not used for model training and validation

Analyzing Data Distribution and Computing the Number of Distinct Elements in a Data Set Consisting of Over One Million Data Points - Uses Spark, Scala, Google Cloud Platform

- Implemented algorithms to find the exact F0 and F2 norms of a data set in order to compute the number of distinct elements and analyze the distribution of the dataset respectively
- Implemented the BJKST and Tug of War algorithms to estimate the number of distinct elements and the F2 norm of the data set respectively and compared the estimates with the actual values
- Leveraged Spark and Google Cloud Platform to parallelize running the above algorithms and compared the run time to running the algorithms locally

“Treble” iOS App - Uses Google Firebase, Google Storage, Google Authentication, Google Place Autocomplete, Mapkit

- Allowed users to create and view events or concerts which are all associated with a title, a time, the number of spots available, description, a location, and an image
- Used Google Firebase and Google Storage to save and read data from the cloud
- Used Google Authentication to allow users to sign into Google
- Used Google Place Autocomplete and Mapkit to search up a location and display it on the map
- Included sorting and saving functionality for users

EXTRACURRICULARS & WORK EXPERIENCE

Boston College Symphony Orchestra, Concertmaster

Boston College Chamber Music Society, First Violinist in String Quartet

Athletic Department Staff **Chestnut Hill, MA**
Boston College November 2018 - Present

- Transition main arena several times a week into a court or ice rink in order to accommodate the multiple sports teams that play and practice in the facility
- Collaborate with 30+ staff by assigning tasks and teams in order to work at maximum efficiency