MAX SHEN

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EDUCATION

University of California, San Diego   *August 2015 - June 2019*

B.S in Mathematics & Computer Science

Relevant Coursework: Advanced Data Structures, Design & Analysis of Algorithms, Mathematics for Algorithms and Systems, Computer Organization & Systems Programming, Components & Design Techniques for Digital Systems, Statistical Methods, Combinatorics, Intro to Cryptography

SKILLS

Languages
- Java, C, C++, Python, Javascript, HTML, CSS, SQL, SPARC, ARM assembly

Development Tools & Frameworks
- React.js, Node.js, Bootstrap, Visual Studio, git, Valgrind

PROJECTS

Fitbook, *React.js, Node.js, Express, MongoDB*
- Collaborated to create a web app that allows users to track their workout progress by logging exercises
- Utilized MongoDB Atlas to store exercise and user information in a logical format
- Developed an efficient UI, allowing users to create, read, update, and delete existing exercise information

Twitter Sentiment Analysis Bot, *Python*
- Regularly scans Twitter for mentions at the bot to check Twitter's opinion polarity for a certain topic
- Generates a polarity score using the VADER sentiment library and replies to tweets with the result
- Makes calls to the Twitter REST API through the tweepy library to search for queries and update statuses

WhereShouldIClimb?, *HTML5/CSS3/Javascript*
- Dynamic web app for locating the nearest rock climbing routes using the MountainProject API
- Organizes retrieved JSON data effectively, only displaying relevant information

Six Degrees of Kevin Bacon, *C++*
- Designed to return the shortest possible list of films connecting any given actor and Kevin Bacon
- Utilization of several C++ data structures to efficiently store a list of IMDB actors and films
- Implementation of Breadth-First Search and Dijkstra's algorithm to compute distances between films and actors in order to find the shortest link

Caesar Shifter, *Python*
- Implementation of a monoalphabetic substitution and chi-square test to encode and decode text files or user inputted strings
- Unit testing for individual functions using pytest to ensure that the code runs smoothly

WORK EXPERIENCE

Lifeguard/Water Safety Instructor

Poway Unified School District, Westview High School   *July 2016*
- CPR and First Aid certified