Tony Sheng
Software Engineer

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TECHNICAL SKILLS

React, Redux, Ruby, Rails, Python, JavaScript, HTML5, CSS3, PostgreSQL, SQLite3, Git, MATLAB, AWS, Heroku

PROJECTS

Castle   (Rails, Ruby, React, Redux, AWS, PostgreSQL, JBuilder, HTML5, CSS3)   live | github
A single page web application inspired by Airbnb, where users are able to find and book places to stay around the world.
- Designed a backend cross-reference check using custom transactional database operations to prevent conflicting reservations with reduced time complexity
- Integrated the Google Maps API to have access to an interactive map along with location search
- Uploaded images on Amazon Web Services S3 (AWS) to reduce load times of the application while allowing for scalability and security
- Applied the unidirectional state management of Redux to handle CRUD actions such as user creation/authentication and reservation submissions

Align   (JavaScript, D3.js, HTML5, CSS3, Webpack)   live | github
A visualization of popular sorting algorithms as a dynamic bar graph.
- Designed a visual representation of some of the most prevalent sorting algorithms including bubble sort, quick sort, and merge sort
- Adapted the recursive sorting algorithms to be in-place, allowing for the manipulation and rendering of the data structures at each operation
- Incorporated D3.js to render each algorithm as a demonstration allowing the user to follow the process visually

SplintPal   (MATLAB)
A device created to accompany splints that help researchers and medical staff forecast proper splint usage in patients.
- Engineered a functional prototype with which was presented to a panel of industry experts and physicians
- Tested and projected prototype data using MATLAB to confirm usability
- Surveyed research on market analysis and constructed a clinical testing plan for potential future deployment

EXPERIENCE

Analyst   *May 2018 - Jul 2019*
Accolend LLC
- Evaluated and mapped client data using pivot tables in Excel in order to provide insights on efficiency
- Overhauled existing system for tracking construction mortgages to maximize efficacy
- Engaged with clients to communicate requirements and guidelines for productive business relationships

Teacher   *Sep 2017 - May 2018*
C2 Education
- Developed and taught an AP Computer Science course focusing on both high level programming concepts and basic Java syntax
- Prepared students for the ACT, SAT, and AP exams in a variety of math and science subjects
- Facilitated student performance by emphasizing proper study habits and applying individualized assessments

EDUCATION

Johns Hopkins University | *Baltimore* | *Bachelor of Science in Biomedical Engineering*   *Aug 2013 – May 2017*
    Relevant Coursework | *Introduction to Scientific Computing in BME using Python, Matlab, and R* |
    Rehabilitation Engineering | *Models and Simulations* | *Systems and Controls* | *Systems Bioengineering* |
    Dynamical Systems | *Probability & Statistics for Engineering*
App Academy | *New York*   *Fall 2019*
    Software engineering course built around Ruby on Rails and Javascript. Topics include TDD, scalability, algorithms, OOP, coding style, REST, and security.