David (Jeahoung) Hong

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EDUCATION

App Academy, Full Stack Software Development program, September 2022
The Cooper Union, Master's in Engineering (Structural Engineering), May 2020
The Cooper Union, Bachelor of Engineering (Structural Engineering), May 2020, *Summa Cum Laude*

SKILLS

Languages: JavaScript, Ruby, Python3, Html5, CSS3, GraphQL
Frameworks: React, Node.js, Ruby on Rails, Express.js
Databases: MongoDB, PostgreSQL, SQLite
Tools: Git, AWS S3, Websocket API, Webpack, D3 (JavaScript)

PROJECTS

Moana, *Ruby on Rails, React, Redux, PostgreSQL, AWS, HTML5, CSS3*   [Live Link](#) | [Github](#)
Full-stack clone of Asana, the project management tool
- Fully functional CRUD features for Teams, Projects, Sections, Tasks using Rails as a backend and PostgreSQL for the database
- Implementation of React Beautiful Drag and Drop to allow for visualization of tasks in lists and boards
- Established sub-task functionality within tasks to create tree-like structure using Rails' polymorphic associations
- Designed inline edit system to allow for real-time edits of model parameter

National Park Visualizer, *Javascript, D3, JQuery, Parks Resource API, Google Maps API*   [Live Link](#) | [Github](#)
Map visualizer allowing users to interact with a map of the USA and discover and learn more about national parks
- Coupled a D3geo interactive US map with coordinates from Parks Resource API to allow users to zoom into states, and click on parks to load a parks information modal
- Created filter and search functionality using native Parks API queries and AJAX requests, allowing users to query parks that meet their desired criteria
- Utilized Parks Resources API, AJAX, Flickr API requests, Google Maps API, to present a photo modal, relevant information, and maps for each national park

Tee Times, *NodeJS, React, MongoDB, Express, Axios, Google Maps Javascript API*   [Live Link](#) | [Github](#)
A golf event and group finder full-stack web application
- Utilized Google Maps API to display course information and events associated with a specific golf course, allowing users to filter events by courses
- Employed Redux state architecture to render tailored events, groups, and profile pages
- Populated events with suggested tags depending on the local state of the user group

Load Determination on Bridges using WIM Data (Master's Thesis), *Python, Numpy*
- Paired Weigh-In-Motion Data with framework method in Python3 to track axle loads along a bridge deck, given strain data. Weigh-In-Motion data eliminated the parameter of axle loads which allowed for vehicles to be tracked along a bridge to a specific resolution given the strain data and a refresh rate.

PROFESSIONAL EXPERIENCE

Building Envelope Consultant - Sullivan Engineering, LLC.   *May 2021 - April 2022*
- Managed on average five ongoing facade restoration projects, led weekly progress meetings, prepared field reports, and communicated updates, required work, and deadlines to owners, contractors, and expeditors.
- Designed roofing systems, building facades, sidewalks, and storefronts for both existing and new construction. Experienced in mass masonry, EIFS, and window wall systems.

Structural Engineer, EIT - Cavalry Associates   *August 2020 - May 2021*
- Designed structural, scope of excavation, and foundation plans using Finite Element software (SAFE, SAP2000, and ETABS) to design steel, concrete, and light-gauge steel buildings
- Created and implemented AutoLISP scripts to generate Builders Pavement Plans in Autocad, streamlining plan production from survey data