# Duke Nguyen

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## SKILLS

Proficiency with JavaScript, Node.js, Ruby, HTML, CSS (SCSS), React, Redux, Jest, GSAP, d3.js, Gatsby, Ruby on Rails, Express, MongoDB, SQL, NPM, Webpack, Git (GitHub), Netlify, Heroku

## PROGRAMMING PROJECTS

**Cellular Automata** | JavaScript, d3.js, HTML & CSS live link | source code

A visual journal detailing the process of cellular automata and its applications in complex and real world physical systems

- Utilized the d3.js library in order to generate live animations of one-dimensional and two-dimensional systems
- Crafted custom algorithms that mimic complex systems such as traffic, forest fires and urban sprawl
- Optimized algorithms with ES6 features such as the use of Sets in order to allow for animations to run smoothly and simultaneously on a single page

**Chimp Casino** | Phaser, MongoDB, Express, React, Node.js live link | source code

Collaborated with a team of three others to create a multiplayer game that was developed on the MERN stack

- Role included the full implementation of the game of blackjack, which involved dispatching WebSockets to allow for multiplayer capabilities, OOP with JavaScript, and React for the user interface
- Enabled the use of a leaderboard and individual profile statistics via the use of a MongoDB server and Axios requests

**Travel Seville** | Gatsby, SCSS live link | source code

A guide to Seville, Spain, this project helps users plan a one day trip around the city

- Integrated the Google Maps API, allowing users to visualize their path along with giving them the ability to click on individual waypoint markers within the map in order to create an interactive experience
- Utilized the GSAP and react-transition-group library to integrate custom designed animations via keyframes and CSS transitions in order to manipulate SVGs and HTML elements
- Implemented a pathfinding algorithm for use with Google Maps in order to solve for a cyclic shortest distance path; algorithm based on a genetic algorithm that features simulated annealing in order to quickly solve for the most optimal path

## EMPLOYMENT

**Data Analyst**

*NovaBay Pharmaceuticals,* Sep 2017 - Oct 2019

Managed the data pipeline for a multi-million dollar pharmaceutical company wherein I provided data analytics for executives and 54 sales representatives across the U.S.

- Utilized Tableau and Excel in order to provide weekly data reports for Rx data and profit projections models, reports were directly presented to executives in order to help formulate actionable insights
- Established a new company best practice to evaluate sales territory viability in order to boost sales volume and efficiently target hotspots that were previously unaccounted, results led to about a 20% growth in sales volume over a single quarter

**Research Assistant**

*University of California, Berkeley,* Sep 2016 - Oct 2017

Assisted a PhD candidate on their research regarding the effects of government incentives within the electric car market in the U.S. and Norway in order to better inform policymakers on when and how to effectively introduce government incentives

- Analyzed a 17,323 row, 24 column dataset on electric and gas car specifications using SQL, Python and MATLAB
- Proposed probabilistic models generated from a 15-year-long time-series dataset for the purpose of hypothesis testing, the results were summarized and presented in weekly reports to PhD candidate

## EDUCATION

**App Academy** *Rigorous full stack web development course with a 5% acceptance rate* (Fall 2019)
**University of California, Berkeley** *BA - Economics* (Spring 2017)
**Orange Coast College** *AA - Architectural Design* (Spring 2015)