Matthew T. Maquiling

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SKILLS
JavaScript, Python, React.js, Redux, Ruby, Rails, PostgreSQL, jQuery, D3, HTML5, CSS3, MATLAB

EDUCATION

App Academy - *12-week, 1000+ hours, full-stack web development intensive in-person course* — Summer 2019
Duke University - *BS Mechanical Engineering and Materials Science | BA English Literature* — Spring 2017

PROJECTS

Extralo *(React.js, Redux, Ruby on Rails, PostgreSQL, HTML5, CSS3)*   Live Site | Github
Extralo is a clone of Trello that allows users to create boards, lists, and cards to manage their personal projects
- Used the *react-beautiful-dnd* library to implement visual rendering of the drag-and-drop features for both lists and cards, creating a simple and intuitive way for users to manage their projects and workflow
- Leveraged a custom built linked-list structure in Rails to persist the visual drag-and-drop changes to a PostgreSQL database, reducing the time complexity of item reordering to constant time and thereby ensuring the scalability of card and list size.
- Leveraged BCrypt and Rails to roll custom user auth, salting and hashing a user's password without saving the plain-text version and used cookies to keep a user logged-in between sessions, improving app security and allowing users to both easily sign-up and login.
- Created custom validations in ActiveRecord for the linked-list data structures, causing the app to fail explicitly during testing and notify the developer of what caused the error, reducing the time spent debugging and troubleshooting

HDWFAbout *(JavaScript, D3, HTML5, CSS3)*   Live Site | Github
App built using vanilla JavaScript that provides context for current events and topics
- Leveraged the AFINN lexicon in conjunction with pure JS to perform sentiment analysis on news articles, assigning a sentiment score and identifying sentiment trends across articles for a user-specified topic
- Used the D3 library to render the processed data in a clean and simple way, allowing a user to get an intuitive feeling for how a "bad" article compares to a "good" or "neutral" one
- Designed a layout that gives a user three ways of interacting with the data in three separate locations, a deliberate redundancy that

Nairrative *(Python, SpaCy, Python-Flask, MATLAB, SQLite)*   November 2018 — May 2019
An app designed to leverage both NLP techniques and therapist expertise to create a more effective therapy session experience
- Used Python-Flask to build an app that allows users to sign-up, login, and securely journal stories or thoughts about their day. Users can also view, edit, and delete any past entries they have written, giving them full control of their data
- Designed an analysis pipeline that uses SpaCy to perform topic prediction on each journal entry, track themes over time, and provide visual feedback to a user on how their mood might fluctuate based on the themes identified in their written journal entries
- Launched a two-week beta-test of the app in which participating users reported an increase of 31% in their daily mood after consistent journaling, regardless of whether they went to a therapy session within the test-period

EXPERIENCE

Product Development & Data Engineer
MONQ, LLC   Aug 2017— Nov 2018
- Worked on 5-person team including another engineer, a pharmaceutical doctor, chemical biologist, and botanist to create an entirely new product line designed around natural nootropics and augmenting the limit of human productivity
- Lead ergonomic optimization efforts for the company's second generation product, drafting and submitting patents for a new design that increased the product usability by 56%
- Used Python to run principal-component and linear-discriminant analyses on consumer and market data, resulting in 3 new KPI strongly correlated with daily revenue performance
- Developed new processes for parallel experimentation in email marketing, increasing throughput by 300%, and via the improved experimentation process, increased click-through-rates by 63% over a 6-week period

President
Chi Psi Fraternity   Oct 2016 — Nov 2017
- Co-founded fraternity of 42 brothers
- Led a board of 7 elected Executive Members and advised all internal committees and officer positions, mitigating conflicts as they arose and established new processes to handle future issues as they arose, maintaining team morale and cohesiveness