

JACOB NICOTRA
SOFTWARE ENGINEER
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SKILLS

JavaScript, Python 3, React - Redux, Flask, Express.js, Node.js, SQL, Sequelize, SQLAlchemy, HTML5, CSS3, Git, Test Driven Dev.

PROJECTS

Perfect Fit Puzzle app (JavaScript, Python, PostgreSQL, SQLAlchemy, Flask, React / Redux, HTML5, CSS3) [Live Site](#) | [Github](#)

- Utilized complex **Flask-SQLAlchemy** database models and queries to allow multiple connections between data tables, eliminate unnecessary database queries, and reduce server load to facilitate a smooth and consistent user experience while puzzle swapping
- Secured user information and autonomy through frontend and backend authentication implementations with **React Router**, permitting users to only access and change their own puzzles and swap requests while logged in
- Designed intuitive navigation by leveraging **React / Redux** to dynamically display embedded links to user pages, puzzles, and swap requests to enable seamless user journey
- Applied comprehensive database queries paired with frontend **Redux** state management and **CSS3** styling allow the user to effortlessly filter puzzle results by a variety of attributes such as category, location, piece count, and difficulty.

Commoji Discord clone (JavaScript, Python, PostgreSQL, SQLAlchemy, Flask, React / Redux, HTML5, CSS3) [Live Site](#) | [Github](#)

- Provided support for live chat feedback by utilizing **Socket.io** with **Flask** and **React** to transport the user to a real-time experience
- Configured backend **Flask** server routes to handle incoming unicode for database storage in conjunction with custom functions in React to translate this unicode to a **HTML**-supported format to display various emoji reactions to the user
- Created smooth messaging environment by leveraging **CSS** with **React - Redux** thunks to allow dynamic buttons, input fields, message interactions, and feedback to the user

LairBnB AirBnB clone (JavaScript, PostgreSQL, SQLAlchemy, Express, HTML5, CSS3, React) [Live Site](#) | [Github](#)

- Leveraged **Express** server routes and **Sequelize** joining queries to reduce unnecessary database queries and serve the front end complex date information in order to provide a smooth user experience while booking
- Utilized **React - Datepicker** to build an intuitive and powerful calendar with custom validations and live feedback to allow users to dynamically see availability, choose and confirm a time-frame, and prevent booking-conflicts

Knick Knack Overflow Stack Overflow clone (JavaScript, PostgreSQL, SQLAlchemy, Express, HTML5, CSS3) [Live Site](#) | [Github](#)

- Built **Express** server routes paired with **Sequelize** querying to enable a fast voting system, where votes are stored permanently and users do not experience shortcomings such as double-voting, miss-voting, or latency
- Implemented **React** thunks to detect a user's vote status and deliver feedback in the form of button **CSS** effects appropriately to create an intuitive, seamless, and responsive user experience

EDUCATION

App Academy - Full Stack Software Engineering

Graduated in Feb 2022

Relevant coursework: DRY, Coding Best Practices, Systems Design, Data Structures, Algorithms, Agile Methodologies, TDD

Elmhurst University - B.S. in Biochemistry

Graduated Magna Cum Laude in May 2019

WORK EXPERIENCE

Optometric Technician - Primary Eye Care Associates

June 2020 – Aug 2021

- Exercised acute **attention to detail & empathetic** care while treating the ocular health of **30+ patients per day**
- Created a **complex excel tracker** that automatically measured, monitored and reported on clinic **performance**, which resulted in a **50% increase** in patient elective procedures and generated **over \$192,000 in revenue** over the course of **one year**
- Mentored 5 new staff members**, training them on medical best practices, clinical conduct, and effective technician skills

Medical Scribe - ScribeAmerica

July 2019 – Jan 2020

- Mastered **200+ hours** of new terminology, insurance codes and compliance procedures at a rapid pace
- Documented complex patient **data** and physician-dictated notes to aid in the treatment of **1000+** patients, including interpretation and summarization of advanced imaging and pathology for **reporting** across staff functions

Tutor - Elmhurst University

Aug 2017 – June 2019

- Explained complex **STEM** material in a concise and accessible manner to **> 50** undergraduate students
- Developed comprehensive study plans to facilitate mastery of university courses (Calculus, Statistics, Physics, Physical Chemistry, General Chemistry, Analytical Chemistry, Biochemistry) and standardized tests (MCAT, GRE)

Undergraduate Research - Elmhurst University & University of Pittsburgh

Dec 2016 – Jan 2019

- Developed a pesticide detector by **analyzing** and **extrapolating** enzyme data using spreadsheets & spectroscopy
- Isolated a novel antibiotic for Staph infection by utilizing **global databases & DNA sequencing**

VOLUNTEERING

Crisis Counselor - National Crisis Text Line

Nov 2018 - present

- Dedicated 200+ hours to effectively counsel those who are suicidal or in emotional crises during all hours of the day, working alongside therapists and psychiatrists to master **communication** and **crisis management skills**