Nicholas (Nico) Carlier | Software Engineer

carlier.nicholas@gmail.com | (415) 740-2670 | GitHub | LinkedIn | WellFound | Portfolio

SKILLS

Technical Skills: JavaScript, Ruby, SQL, Git, React, Ruby on Rails, Node, Redux, Express, jQuery, Python, HTML5, CSS3, PostgreSQL, MongoDB, AWS S3, Webpack, RSpec, jBuilder, AJAX, OpenAi API, Google Maps API, Design Patterns, Sass, UX/UI
Other Skills: Teamwork, Motivated, Interpersonal Skills, Fast learner, Entrepreneurial

PROJECTS

Reps 'N' Recipes | Live - Web app for tracking and visualising fitness and nutrition progress. GitHub

- Engineered backend architecture using Express.js for lightweight and performance-optimised features and MongoDB selected for schema-less data model— diverse and evolving user fitness metrics
- Utilised React.js for the frontend development, chosen for its virtual DOM and reusable components
- Implemented Redux for global state management, reducing API calls allowing live meal and workout data sync across components
- Integrated the Spoonacular API to provide dynamic meal tracking, selected for its comprehensive food database, which aligned with the application's flexible MongoDB schema
- Stored exercise GIFs in AWS S3 for high availability and faster load times, improving user experience (UX)
- Used session storage and React hooks to persist workout and timer data across page refreshes, enhancing UX
- Utilised Chart.js for real-time analytics visualisation, providing user insights into their performance and dietary habits

Fairbnb | Live - Single page Airbnb clone. Sign up, search, book, leave reviews, use map, calendar GitHub

- Reduced PostgreSQL database tables by 25% and heavily DRYed up backend through use of polymorphic tables on the database level
- Crafted custom SQL queries using Active Record associations to extract data from multiple tables in one query, reducing server load
- Integrated Google Maps API to display listings to toggle between list and map mode for seamless user experience
- Assembled a responsive user interface (UI) with React, integrated with Redux for global state management
- Architected RESTful APIs to facilitate CRUD operations, allowing users to book, review and update bookings with high performance
- Fortified application with CSRF protection, restricting CRUD operations to authenticated users, bolstering data integrity and security

Tubify | Live - Single page JavaScript app. Youtube url to text then customise with ChatGPT GitHub

- Crafted a highly intuitive and responsive user interface utilising vanilla DOM, ensuring seamless interaction across various devices
- Employed Sass for efficient modularization of style sheets, enhancing maintainability and scalability
- Leveraged Youtube's API to fetch youtube transcripts. Engineered prompts for OpenAI's API transform and format raw transcripts

WORK EXPERIENCE

Mechanical Engineering Intern → Mechanical Engineer | Aroa Biosurgery | Auckland, New Zealand 11 / 2022 – 05 / 2023

- Improved design of embroidery machine tension regulation system to reduce breakages of suture in production of biomedical devices and significantly reduce downtime in the production line. Worked in an agile team of engineers to quickly solve complex problems.
- Successfully designed and delivered detailed calculations, CAD and design specifications for a pneumatic toggle press for industrial die cutting machines and decreased overall cost estimates by 400%

Mechanical Engineering Intern | Sunfed | Auckland, New Zealand 01 / 2022– 03 / 2022

- Designed and implemented a conveyor-joining device preventing thousands of dollars per day in food waste in the production line

EDUCATION

Full-Stack Software Engineering Bootcamp | App Academy | San Francisco, CA 05 / 2023 – 10/ 2023

BEng. in Mechanical Engineering (Honours) | University of Auckland | Auckland, New Zealand 02 / 2020 – 11 / 2023
Relevant Coursework: Engineering Computation and Software Development (MATLAB, C), Electronics and Computing (MATLAB, C), Control Systems & Multivariable Control Systems (MATLAB, Simulink)

BCom. in Economics and Finance (⅔ years) | University of Auckland | Auckland, New Zealand 02 / 2020 – 11/2023