

John O'Brien

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PROJECTS

Tremendo [Live Site](#) | [Github Repository](#)

A collaborative project management platform inspired by Trello that enables teams to visualize and organize their work through interactive Kanban boards with a simplified layout.

- Built a RESTful API with Node and Express.js featuring a multi-stage CICD pipeline using GitHub Actions, automating testing, build, and deployment processes to ensure code quality and reliability.
- Designed and developed a user-friendly client-side application with React, allowing users to organize their projects with drag-and-drop Kanban boards.
- Incorporated a third-party email service to allow email verification on registration and the implementation of a forgot password feature.
- Implemented JWT authentication to secure user data and allow for collaboration between users.
- Configured a MongoDB database for storing user data, boards, lists, and cards, along with schemas designed for efficient data retrieval and management.

Chord Builder [Live Site](#) | [Github Repository](#)

An innovative web application that allows teachers and students to create, customize, and export professional chord diagrams for stringed instruments and allows them to download their creations as a PDF file.

- Engineered a React-based web application utilizing Vite for optimized builds, enabling musicians and teachers to create, customize, and export professional chord diagrams through an intuitive interface.
- Implemented a dynamic PDF generation system using html2canvas and jsPDF, transforming complex DOM elements into high-quality, print-ready documents while maintaining consistent formatting across devices.
- Designed a responsive component architecture with reusable elements like GuitarDiagram and ChordDisplay, leveraging Tailwind CSS for a fluid layout that seamlessly adapts from desktop to mobile interfaces.
- Developed an interactive chord creation system with real-time preview capabilities, allowing users to place notes, add indicators, and manipulate fret positions through an event-driven interface.
- Built a flexible grid management system supporting multiple layout configurations (4x4, 6x6, 8x8), incorporating state management for seamless editing and arrangement of chord diagrams.

WORK EXPERIENCE

Cobrizo Geología Ambiental

Feb 2022 – Sept 2022

International Business Support Analyst

Santiago, Chile

- Directed communications and management of English-speaking clients. Duties included language assistance during video conferences, simultaneous interpretation, and document review and translation to aid the interactions between the company and Non-Spanish-speaking clients and collaborators.

Sunburst School of Music

Jan 2015 – Jan 2020

Music Teacher and Program Developer

Pittsburgh, PA

- Provided music instruction and developed educational programs, including private lessons, group band programs, and an instrument rental service to support student learning and business growth.

John Page Classic Guitars

Nov 2017 – Jan 2020

Musical Director

Pittsburgh, PA

- Coordinated with the CEO and marketing team to organize live-streamed music events.

EDUCATION

University of Pittsburgh

B.A. Economics, Philosophy, Jazz Studies

Pittsburgh, PA

SKILLS

- **Technologies:** JavaScript ES6+, Node.js, Express.js, MongoDB, PostgreSQL, React.js, Tailwind CSS, RESTful APIs, JWT Authentication, AWS S3, Git, GitHub, Jest, Vitest
- **Languages:** English (Native), Spanish (Professional Proficiency)