Mark Robertson | Software Engineer

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Detail-oriented and goal-driven, with a strong foundation in software development and a passion for web applications, AI-driven solutions, and data-driven technologies. With extensive experience in finance and securities trading, I bring a unique perspective to building intuitive, user-centric applications that enhance business processes. I thrive in dynamic environments, collaborating with cross-functional teams and stakeholders to align technology solutions with business goals. I enjoy working with others to optimize user experiences and leverage AI and automation. Eager to apply my problem-solving skills, entrepreneurial mindset, adaptability, and analytical thinking to innovative projects, I am committed to continuous learning and growing as a developer.

TECHNICAL SKILLS

Project Management Notion, Asana, Trello	Methodology SCRUM Method
Programming Languages JavaScript (ES ₅ /ES ₆), HTML ₅ , CSS ₃	Libraries React, Bootstrap, Tailwind
Front End React.js, Tailwind CSS, Bootstrap, Axio	Developer Tools Git, npm, GitHub, VScode, Postman
Back End Express.js, Node.js, Restful API's, COR	S APIs OpenAI, Google Maps, NYC Open Data
Database PostgreSQL, ElephantSQL	Test/Deploy Jest, Cypress, Netlify, Render
Design Tools Trello, Asana, Figma	Code Quality ESLint, Prettier

SOFTWARE ENGINEERING APPLICATIONS

TimeCard App

Personal project – Project Owner/Originator.

https://mark-timecards.netlify.app

Synopsis: A timecard application actively used by We Care Adult Care, Inc., replacing manual paper-based tracking with a streamlined digital solution. Employees can now log work hours digitally, while administrators generate reports, print timesheets, and export data to CSV for seamless Paychex payroll integration.

Key Contributions & Impact:

- Developed and deployed a fully functional timecard system that calculates daily and biweekly total hours based on a structured two-week cycle.
- Integrated Firebase authentication to ensure secure role-based access, allowing employees to view only their data while admins oversee all timecards.
- Improved reporting efficiency by enabling one-click CSV export, reducing manual payroll entry time.
- Optimized UI/UX with a React-based calendar, ensuring intuitive and seamless timecard creation.

Tech Stack: Frontend: JavaScript, React.js, HTML5, CSS, BootStrap. Backend: NodeJS, Express.js, Restful APIs.

Database: PostgreSQL, Neon. Deployment & Hosting: Netlify, Render

City Whisperer

Group Collaboration - Project Owner/Originator.

https://citywisperer-mark.netlify.app

Synopsis: City Whisperer is an AI-powered self-guided tour generator that tailors personalized walking tours for users in any city, based on duration, difficulty, and theme preferences. This project combines AI, automation, and geolocation services to deliver a seamless and immersive travel experience, with narrated points of interest commentary.

Key Contributions & Impact:

- Spearheaded the development of a dynamic React app, integrating OpenAI API for AI-generated routes and points of interest.
- Optimized system performance with async programming, concurrency mechanisms, and retry strategies for reliability.
- Enhanced security by implementing a sanitization function to mitigate SQL injection risks.
- Designed an intuitive UI/UX using Tailwind CSS, making the app visually appealing and easy to navigate.

Tech Stack: Frontend: JavaScript, React.js, Tailwind CSS. Backend: NodeJS, Express.js, Restful APIs.

APIs: OpenAI, Google Maps, Unsplash. Database: PostgreSQL, ElephantSQL.

Deployment & Hosting: Netlify, Render.

Design & Prototyping: Figma. Project Management: Trello.

Methodology: SCRUM Method.

Access & Learn (Winning Hackathon Project – Best Storytelling)

Group Collaboration – Pair Programming

https://accessandlearn.netlify.app

Synopsis: Built to address educational accessibility, Access & Learn is a React-based platform designed to support individuals with dyslexia and literacy challenges. The app provides text-to-speech features, a dyslexia test, and real-time literacy program locations via NYC Open Data.

Key Contributions & Impact:

- Developed a percentage-based dyslexia diagnostic test for accurate user assessment.
- Integrated Google Maps API & NYC Open Data, providing real-time access to local literacy programs.
- Enhanced accessibility by implementing text-to-speech functionality, ensuring usability for individuals with literacy challenges.
- Designed a React-based Jigsaw puzzle as an engaging interactive entry point.

Tech Stack: Frontend: React.js, JavaScript, HTML5, CSS. Backend: NodeJS, Express.js., Restful APIs.

APIs: NYC Open Data, Google Maps, Deployment & Hosting: Netlify.

Design & Prototyping: Figma. Project Management: Trello. Methodology: SCRUM Method.

Other Projects:

My Luxury Rides https://myluxuryrides.netlify.app YouTube Clone https://beautiful-selkie.netlify.app Weather App https://marks-weather-app.netlify.app

PROFESSIONAL EXPERIENCE

Part-Time Driver | Software Developer | We Care Adult Care, Inc.

June 2023 - Feb 2025

- Developed and deployed a full-stack timecard application, replacing a manual pen-and-paper system.
- Built the front end with JavaScript and React, and the back end with Express and SQL, using Neon for database management.
- Successfully launched the app via Netlify and render, and it is now actively used by staff.

Founder/Principal of Securities Trading | St. Albans Capital, LLC

March 1996 - Dec 2022

- Directed a team of five traders, managing daily transactions of \$100M+ in high-yield bonds, equities, and U.S. Treasuries.
- Utilized Bloomberg Terminal to analyze market inefficiencies, price discrepancies, and liquidity trends, optimizing trading decisions.
- Reported directly to four high-net-worth clients, providing transparent and insightful reporting on market activities and trading
 performance. Maintained a high level of client satisfaction through effective communication and strategic decision-making.

CEO | Phaz Music Corp. (Headphone Manufacturer)

June 2017 - Aug 2018

- Appointed CEO by the co-founder to assume the role of CEO to raise capital and continue product development. Conducted visits with factories in Shenzhen, China to finalize production, and held key meetings in Hong Kong to enhance headphone features and lithium battery manufacture and configuration. **Best of CES 2015, Issued by Techlicious · Jan 2015 for P2 headphones.**
- Initially secured \$5 million in financing by onboarding a CPA to assist in creating an offering memorandum.
- Spearheaded negotiations and crafting agreements, fostering crucial partnerships with distributors and an independent sales team.

Managing Member (1 of 3) | Investment Club 101, LLC (Black Box Trading)

Feb 2006 - July 2012

- Formed a dynamic team to develop and fund a black box equity trading system, incorporating a core AI engine.
- Secured \$100,000 in seed financing dedicated to trading capital so the trading system could be taken live.
- Successfully launched and managed the Beta system, hosted by Genesis Securities.

EDUCATION

Pursuit.org | Advanced Software Engineering Immersive Program

AWARD Best Storytelling, Pursuit Hackathon for the class of 9.3 & 9.4 Project: accessandlearn.netlify.app

Rutgers the State University of NJ - School of Business | BS in Marketing

University of Hertfordshire, UK | BA in Applied Art

PATENTS

A device for alerting the wearer of jewelry, that a precious stone is loose within its setting.