

Forest Welch

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EDUCATION

University of Pennsylvania B.A. in Linguistics, minor in Deaf Studies	Philadelphia, PA 2012 - 2016
App Academy Fullstack Engineering Certificate	San Francisco, CA 2018

EXPERIENCE

BuildVision <i>Software Engineer</i>	San Francisco, CA November 2023 - April 2024
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- Joined as the second engineer in a team of five, spearheading the development of UI for admin tools and user-facing views using Next.js and React.
- Leveraged RTK Query's cache tags to optimize data management and API interactions, building reusable Table and Pagination components with result caching, search filters, and inline editing.
- Established a comprehensive design system using NextUI, creating reusable components and standardizing styles, such as a file folder viewer with recursive nesting and state management.

Autodesk (Formerly BuildingConnected) <i>Software Engineer</i>	San Francisco, CA August 2018 - January 2022
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- Authored an org-wide React UI component library, reducing library size by ~30% and increasing functionality by ~50%.
 - Consolidated disparate component libraries into a unified system, introducing styled-components to replace JSS-in-CSS and simplifying the coding process.
 - Developed common components such as pagination, file viewer, and flyout components, enhancing their functionality and standardization.
- Led a localization and internationalization initiative, doubling the user base by expanding into New Zealand and Australia, pivotal for Autodesk's acquisition.
 - Implemented a centralized translation system using react-i18next with hierarchical locale determination and fallback languages.
- Transformed internal tools from Angular to React, significantly improving Customer Success operations and resolving critical issues in multi-million dollar contracts.
 - Initiated the transition during a hackathon, redesigning the UI for better performance and user experience, and developing a single-page application for enhanced search functionality.
 - Fixed a critical date picker bug, saving several million dollars by preventing contract expiration issues.
- Led the development and implementation of the estimated cost feature, a critical tool used in the bid leveling process (>5000 uses per week).
 - Crafted a comprehensive design document, updated REST endpoints, and developed a reusable EstimatedCost component integrated with the Redux store.
 - Implemented memoization techniques using reselect to optimize performance and added extensive unit and integration tests to ensure accuracy and reliability.
- Mentored two entry-level engineers and an intern, providing structured onboarding sessions, conducting pair programming, and offering detailed, constructive feedback during PR reviews.
- Improved team morale and mitigated burnout during COVID by organizing and hosting bi-weekly yoga and meditation Zoom calls, along with weekly pair programming and board game sessions, fostering a supportive and collaborative work environment.

- Played a key role in expanding Autodesk's talent pool by designing and leading a comprehensive frontend interview process, including creating coding challenges, technical questions, and organizing interview panels. Supported the launch of a satellite office in Toronto by coordinating with HR, IT, and facilities teams to set up infrastructure and ensure smooth onboarding. Provided hands-on support during the initial phase and established regular communication and training sessions to align the new office with the main office's culture and processes.

SKILLS

Proficient: JavaScript, React, Next.js, Redux, Node.js, MongoDB, Git, CircleCI
Familiar: Typescript, React Native, Angular, PostgreSQL, Docker, Heroku, AWS, Elastic Cloud, Redis, Mongoose, GraphQL, Jest, Cypress, Ruby on Rails, Webpack, jQuery