

# Nathan Peel

Software Engineer

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## Skills

TypeScript, JavaScript, React, Next.js, HTML, CSS, Node.js, Express, MongoDB, PostgreSQL, Tailwind CSS, Redux/RTK, Python, Java, React Native, Jest, Supertest, React Testing Library, React Flow, Zustand

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## Experience

### **Next.Nav | Software Engineer**

**Jan 2023 - Present**

- Led the implementation of Next.js with server-side rendering and lazy loading for a promotional website, enhancing SEO and UX enhancements, resulting in over 10K+ downloads on the VS Code Extension store.
- Enhanced the file processing and visualization module utilizing TypeScript for robust type checking and compile-time error detection, optimizing maintainability, readability, and DX while reducing debugging time by 20%.
- Collaborated to integrate React and React Flow, harnessing React's component-based architecture and efficient diffing algorithm to display an interactive hierarchy tree with backend data, reducing Next.js route creation/navigation by 25%.
- Leveraged the VS Code Extension API to enable direct file manipulation within the extension, accelerating user workflow while facilitating smooth frontend/backend communication, resulting in a 15% quicker feature delivery speed.
- Integrated the ELK.js library for efficient layout calculation and node positioning within the React Flow panel, reducing development time by 60% and enhancing the visual appeal of Next.js app router folder structures, improving the UX.
- Applied Chakra UI and Next UI to access pre-styled and accessible React components such as modals and pop-ups, streamlining the codebase and reducing styling time, leading to rapid UI development and refined user workflow.

### **Tony's Total Service | Contract Software Engineer**

**Jan 2022 – Jan 2023**

- Spearheaded the organization, design, and development of a lead generation website equipped with scheduling capabilities while fostering careful communication with the owner, driving a 50% increase in lead conversion rates.
  - Designed UI with Figma, prioritizing UX and accessibility while maintaining project plans and style guides.
  - Optimized scalability and reliability using Jest with Supertest for testing Express routes and React Testing Library for user-centric testing and accessibility checks, achieving 82% testing coverage.
  - Engineered an Express/Node RESTful API following the Model-View-Controller architecture to process client requests and database operations using request routes, producing backend maintainability and modularity.
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## Engineering Projects

### **Shelph - Reading list management web application**

- Developed a MongoDB for quick implementation and flexible schemas to store user information while preventing data loss and ensuring ACID compliance, ultimately enhancing system reliability and scalability.
- Wielded Tailwind's intuitive utility classes and flexible configuration options, reducing cognitive overhead, eliminating unused CSS, amplifying maintainability, and accelerating styling-related development by 25%.

### **ReqRes - Restaurant Recommendation web application**

- Utilized Redux Tool Kit for the opinionated design and scalability to manage state within the React application while decreasing debugging time by 16% using the Redux dev tools.
- Architected a PostgreSQL database system ensuring ACID compliance to effectively manage complex queries and store comprehensive relational data about restaurants, maintaining data consistency and integrity.

### **Parken - Parking spot finder mobile application**

- Employed React Native's component-based architecture, extensive community and library support, and cross-platform compatibility to develop a high-performance mobile application for both iOS and Android platforms.
  - Implemented React-Native-Maps to display interactive Apple Maps components within the React Native Application, coupled with the Google Places API to seamlessly load and visualize parking data, improving navigation UX.
  - Harnessed Zustand with 3 other engineers to organize the state in the React Native application for the minimal setup, limited boilerplate, small library size, and fast performance, limiting bugs and decreasing cognitive overhead.
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## Education

Codesmith | Advanced Residency for Software Engineering  
Grossmont College | Computer Science

2023

## Publications & Public Talks

- **Why and How to Use Design Patterns** | Jeeny and Bractlet Tech Talk Series: Why
  - **Next.Nav: The Solution to Confusing File-Based Routing in Next.js** | Medium.com
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## Interests

Stoicism, Meditation, Avatar: The Last Airbender, Berserk, Stardew Valley, Visiting the San Diego Zoo, Thomas Paine