

SOFTWARE ENGINEER

Currently pursuing a degree in Software Engineering/ Information Technology with a strong interest in quality assurance, automation, DevOps, and non-functional testing. Skilled in Selenium with Java for web automation, API testing (Postman, ReadyAPI), and understanding of security, performance, and accessibility testing. Equipped with basic programming knowledge, strong analytical skills, attention to detail, and a proactive mindset. Eager to learn, grow, and contribute to software quality excellence.

EDUCATION

Bachelors in Information Technology, 2023 - 2025

Concentrations: Software Development & Networking Technologies

Related Coursework: React.js | JavaScript & Typescript | Node.js | REST APIs | Object-Oriented Programming | Python | SQL | Git | Cloud Computing | Machine Learning | PyTorch | Deep Learning | Data Science | Big Data | Algorithm Development | Python | NumPy | Pandas | Scikit-learn | Data Visualization | Statistical Analysis

SKILLS

- Programming:** Proficient in Python, TypeScript, React, React Native, Expo, JavaScript, MongoDB/Mongoose, Node.js/Express.js, REST APIs.
- Data Structures & Algorithms:** Strong problem-solving with efficient batch processing, caching strategies, and optimized data modeling.
- Web Development:** Skilled in React Context API, custom hooks, TypeScript interfaces/types, real-time WebSocket integration.
- Mobile Development:** Proficiency in React Native, gesture handling, background audio, platform-specific development (iOS/Android).
- System Design:** Understanding of scalable architectures, real-time event processing, analytics systems.
- Databases:** Experience with MongoDB transactions, batch operations, real-time analytics tracking, efficient querying patterns.
- Cloud & DevOps:** Familiar with Backblaze B2, Cloudflare CDN, PM2 process management, Nginx reverse proxy.
- Testing:** Knowledge of error handling patterns, retry mechanisms, rate limiting, security best practices.
- Version Control:** Proficient in Git workflows and code review processes.
- Collaboration:** Strong communication and technical documentation in Agile environments.

PROFESSIONAL EXPERIENCE

Web Design Intern

May 2024 - August 2024

<https://quicksite.guru/>

- Designed and implemented the company's landing site using React.js, HTML, CSS, and JavaScript, delivering an engaging user experience.
- Contributed to the development of an AI-driven platform for generating instantaneous single-page websites based on user prompts.
- Collaborated with the team to conceptualize and develop the website, ensuring seamless integration of AI-driven designs with smooth user interactions.
- Integrated GSAP animations to elevate interactivity and visual appeal.
- Created responsive website templates to enhance the platform's prototype.
- Utilized Figma for design mockups, ensuring efficient transitions from concept to implementation.
- Strengthened expertise in front-end development and team collaboration in a fast-paced startup environment.

Web Design Contract

October 2024- December 2024

<https://www.prasidcashmere.com/>

- Developed a dynamic website for a luxury fashion house using Next.js, HTML, CSS, and JavaScript, focusing on enhancing user experience and visual appeal.
- Managed image hosting for the site, ensuring seamless performance and fast load times for high-quality visuals.
- Handled domain setup and implementation, ensuring the website's accessibility and smooth deployment.
- Collaborated with the team to deliver a polished, user-friendly website, ensuring it aligned with the brand's premium aesthetic and functionality.

PROJECT EXPERIENCE

End-to-End Music Streaming and Player Service

<https://github.com/kid0733/napstr>

Sept 2024 - Present

React Native/Expo Mobile App + Node.js/Express Backend

Engineered a cost-efficient music streaming platform with innovative infrastructure design:

Infrastructure Innovation:

- Architected zero-cost content delivery system supporting 200+ users by leveraging Cloudflare's proxy to route Backblaze B2 traffic
- Implemented intelligent caching and bandwidth optimization reducing storage costs by 95%
- Designed custom CDN routing system enabling free music streaming at scale
- Built resilient file delivery system with automatic failover and region optimization

Backend Architecture:

- Designed scalable REST API using Node.js/Express with MongoDB
- Implemented efficient batch processing reducing API calls by 90%
- Built real-time analytics system processing 100K+ daily events
- Developed smart rating algorithm with confidence scoring
- Created retry mechanisms with exponential backoff for resilience

Mobile Application:

- Developed cross-platform app using React Native/Expo with TypeScript
- Implemented fluid animations and gestures using Reanimated
- Built background audio playback with Track Player and real-time lyrics
- Optimized performance with FlashList virtualization and efficient caching
- Created modular component system with Context API and custom hooks

Technical Impact:

- Eliminated streaming costs for up to 1000 concurrent users
- Reduced API latency by 70% through chunked processing
- Achieved 99.9% uptime with distributed content delivery
- Technologies: TypeScript, React Native, Expo, Node.js, MongoDB, Cloudflare, Backblaze B2, WebSocket, PM2