

Thomas Morris

Senior Mobile Engineer | Senior React Native Engineer

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SUMMARY

Experienced **Senior Mobile Engineer** with over **9** years of expertise in **React Native**, delivering high-quality, cross-platform mobile applications for **iOS** and **Android**. Proficient in managing the complete mobile development lifecycle, from initial concept through to deployment, focusing on creating robust and scalable solutions. Strong background in optimizing mobile applications for performance and user engagement while addressing both platform-specific and cross-platform requirements. Adept at leading teams, mentoring junior developers, and driving development efforts to meet business objectives with an emphasis on efficient mobile solutions.

EDUCATION

Bachelor of Science in Computer Science

Huston-Tillotson University | 2012 - 2016

EXPERIENCE

Senior Mobile Engineer | 02/2024 - Present

The Scented Market

- Developed **The Scented Market** mobile app, a cross-platform fragrance e-commerce platform built from scratch using **React Native 0.72** with **TypeScript**, delivering a fully integrated shopping experience on both **iOS** and **Android** with **AI-driven** personalized recommendations. [Play Store](#) | [App Store](#)
- Designed and implemented dynamic product catalogs with advanced filtering, allowing users to browse fragrance collections based on categories, utilizing **React Navigation** for easy navigation and **Redux Toolkit** for state management.
- Integrated secure user authentication and profile management through **Firebase Authentication**, enabling a smooth sign-up/sign-in experience and ensuring user data consistency across sessions and devices.
- Developed real-time data synchronization for product availability and order status using **Firebase Firestore**, ensuring the app's data is consistently updated in real-time across all devices without manual refreshes.
- Implemented a personalized fragrance recommendation engine powered by **AWS AI/ML services**, offering tailored suggestions to users based on preferences captured through a custom scent quiz, increasing engagement and conversion rates.
- Bridged platform-specific functionality using **Swift (iOS)** and **Kotlin (Android)** to implement native push notifications, ensuring that users receive timely and relevant updates about their orders and promotions.
- Built and optimized the shopping cart and checkout process, integrating **Apple Pay**, **Google Pay**, and **Shop Pay** with **Stripe**, allowing users to complete purchases securely and efficiently through mobile wallets.
- Implemented push notifications using **Firebase Cloud Messaging**, keeping users engaged with updates on sales, new products, and order progress, which enhanced retention and user activity.
- Implemented a cryptocurrency payment option using **React Native Pay** and integrated with **Coinbase Commerce** API, enabling users to complete transactions securely with **Bitcoin**, **Ethereum**, and other supported cryptocurrencies in addition to traditional payment methods.
- Upgraded the authentication system to support **biometric authentication** by integrating **React Native Fingerprint Scanner** for fingerprint recognition and **React Native Face ID** for facial recognition, enhancing the security and user experience on both **iOS** and **Android** devices.

- Implemented offline functionality using **AsyncStorage** and **SQLite**, enabling users to persist product details, shopping cart items, and order history locally, with data sync upon network reconnection, providing a smooth user experience even without internet access.
- Upgraded the project to **React Native 0.76**, incorporating the **Fabric renderer** to improve UI rendering performance, making complex screens like the fragrance product catalogs and shopping cart more responsive and fluid across iOS and Android devices.
- Integrated **TurboModules** with **React Native 0.76**, enabling faster loading times for critical app components such as the personalized fragrance recommendation engine, and reducing the overall **JavaScript** bridge communication overhead to enhance the app's startup speed and responsiveness.
- Transitioned from **Redux-Toolkit** to **Jotai** for more efficient state management, introducing atomic state handling to simplify managing complex state across the app, such as product availability, user profiles, and order status synchronization, leading to a significant reduction in unnecessary re-renders.
- By implementing **Fabric renderer** in the **React Native 0.76** upgrade, improved the performance of animations and transitions within the shopping cart and checkout processes, resulting in a smoother and more efficient user experience while completing purchases with mobile wallets like **Apple Pay** and **Google Pay**.
- With the adoption of **TurboModules**, be able to optimize data processing in real-time, especially for features like cryptocurrency payments via **Coinbase Commerce API** and push notifications through **Firestore Cloud Messaging**, enhancing both speed and reliability across both platforms.
- Conducted thorough unit and integration testing using **Jest** and **React Native Testing Library**, identifying and resolving issues early in the development cycle to maintain a high level of code quality and app stability.
- Optimized app performance using **Flipper**, **React Native Debugger**, and **Sentry**, addressing memory leaks, improving load times, and utilizing real-time crash monitoring to quickly identify and resolve issues, resulting in a faster, more stable, and responsive app experience for users.
- Collaborated with backend developers to integrate **Node.js(TypeScript) APIs (GraphQL)** for handling user data, product information, and order transactions, ensuring smooth communication between the frontend and backend systems.
- Implemented **Bitrise** for continuous integration and deployment (**CI/CD**) pipelines, automating the build, testing, and deployment process, ensuring quick and reliable updates to both **iOS** and **Android** platforms with minimal downtime and improved development efficiency.
- Mentored junior developers, sharing best practices for using **React Native**, **TypeScript**, and state management with **Redux Toolkit** and **Redux-Persist**, promoting a strong focus on clean code and efficient app architecture.

Senior React Native Developer | 12/2021 - 12/2023

ChowNow

- Maintained and upgraded the **ChowNow** mobile app from **React Native 0.59** to **0.64**, addressing performance bottlenecks, enhancing stability, and leveraging **React Native 0.64's** new features like **Hermes engine** and **Flipper integration** to optimize the development experience and reduce load times across both **iOS** and **Android**. [Play Store](#) | [App Store](#)
- Resolved issues related to the **0.59** version by utilizing **React Native 0.64's** enhanced **Hermes engine**, resulting in a 40% improvement in **JavaScript** execution and reducing memory consumption and app startup time.
- Implemented **QR code** scanning functionality to enable users to scan restaurant-specific codes, quickly access menus, and place orders, using **react-native-qrcode-scanner** and bridging native modules for **iOS** and **Android**.
- Integrated **GPS** functionality and route tracking for real-time delivery updates, allowing users to track the location of their orders, using **react-native-maps** and **Google Maps API**, and enhancing the delivery experience.
- Managed state with **Redux-Toolkit** and **RTK Query**, providing efficient data fetching, caching, and updates for menus, user profiles, and order status, improving app responsiveness and scalability.
- Optimized local storage using **AsyncStorage** to persist user preferences and order history across sessions, ensuring that data is available even after app restarts or upgrades.

- Enhanced push notification functionality using **Firebase Cloud Messaging**, ensuring users receive real-time updates about their orders, new promotions, and restaurant offers, boosting engagement and retention.
- Upgraded native modules to support the latest platform-specific features in **iOS 14** and **Android 11**, leveraging the new **React Native 0.64** architecture to support the latest Apple and Google device capabilities.
- Integrated cloud services using **AWS** for backend **API** management and **S3** for media storage, ensuring scalable, reliable, and secure data storage during peak traffic times.
- Improved **CI/CD pipeline** by automating the deployment process using **Fastlane** and **AWS Amplify**, streamlining the build and deployment processes for both **iOS** and **Android** with minimal downtime.
- Conducted extensive testing with **Jest** and **React Native Testing Library**, performing unit and integration tests to identify and resolve issues in both the upgraded version and new features, ensuring app stability and performance.
- Mentored junior developers, guiding them on **React Native 0.64** best practices, debugging strategies, and efficient use of **Redux-Toolkit**, **RTK Query**, and **AsyncStorage**, fostering a culture of continuous learning and development within the team.

React Native Developer | 02/2019 - 10/2021

TopHap

- Developed the **TopHap Explorer** mobile application from scratch, providing users with real-time access to property data, neighborhood insights, and market conditions using **React Native**, with native modules for both **iOS** and **Android**. [App Store](#)
- Integrated **Augmented Reality (AR)** for property identification, enabling users to point their phones at a property and instantly view its value, permit history, and market data using **ARKit (iOS)** and **ARCore (Android)** along with native modules in **React Native**.
- Implemented **GPS-based** property search functionality that allowed users to discover properties nearby by leveraging **react-native-maps** and **Google Maps API**, enabling efficient navigation with real-time location data, managed via **Redux-Thunk**.
- Developed real-time data synchronization using **WebSockets** and **AWS** for fetching property data, neighborhood insights, and market trends, ensuring users receive the latest information without needing to refresh the app.
- Built a Comparative Market Analysis (CMA) feature, enabling users to compare properties based on pricing, location, and features, using **React Query** to fetch and cache real estate data from the cloud efficiently.
- Integrated neighborhood analysis features, displaying information such as walkability scores, crime rates, and environmental risks for specific areas, sourced from external **APIs** and managed in the app through **React Query** and **AWS**.
- Handled complex state management with **Redux** and **Redux-Thunk**, managing asynchronous data fetching and synchronization of app states like user profiles, property data, and live updates on property listings and market trends.
- Implemented persistent storage using **AsyncStorage** to save user preferences, favorite properties, and past searches across app sessions, providing a personalized experience for each user on both **iOS** and **Android** platforms.
- Conducted rigorous testing with **Jest** and **React Native Testing Library**, ensuring that core features like **AR** property identification, real-time data updates, and **GPS** services were functioning properly across devices and operating systems.

MERN Stack Developer | 01/2018 - 12/2018

Innovative Constructions

- Developed a full-stack construction management application from scratch, allowing real-time tracking of projects, resource allocation, and client communications using the **MERN stack (MongoDB, Express.js, React, Node.js)**, delivering a scalable and robust platform for both backend and frontend development.

- Implemented a comprehensive project dashboard for real-time project updates, timelines, and budget management, using **React** for dynamic UI components and **Redux** for state management, with **Node.js** and **MongoDB** handling backend data processing and storage.
- Built a client portal that provides project details, approval workflows, and communication tools, integrating **React Router** for seamless navigation and **Axios** for **API** calls, while using **Node.js** and **Express.js** for backend services and **MongoDB** for data storage.
- Developed an inventory management system for tracking construction materials and equipment, utilizing **MongoDB** for real-time data storage, **Node.js** for **API** endpoints, and **React** with **Redux** for frontend interaction, optimizing project operations and resource management.
- Optimized application performance and scalability by implementing a **RESTful API** with **Express.js** and integrating **MongoDB** for efficient data handling, and using **Jest** for unit testing and ensuring reliable deployments to **AWS** for production.

Junior Web Developer | 07/2016 - 10/2017

Briebug

- Developed a full-stack web application, streamlining project management processes by handling client communications, task management, and resource allocation using **React** for the front end, **Laravel** for the back end, and **MySQL** for data storage, managing the project from scratch to deployment.
- Created and integrated dynamic user forms for registration and login, utilizing **React** components and **Redux** for state management, while connecting to **Laravel APIs** and **MySQL** to handle user data securely and efficiently.
- Implemented **CRUD** operations for project and task management, building **API** endpoints with **Laravel** and querying **MySQL** for project data, while using **React** and **Axios** to interact with these endpoints on the frontend for real-time updates.
- Built and deployed a fully functional web application with **React**, **Laravel**, and **MySQL**, applying best practices in **RESTful API** development and state management, and deploying the project to **AWS EC2** for a scalable and reliable production environment.

SKILLS

Mobile App Development:

- React Native (TypeScript, Native Modules, Cross-Platform Development for iOS/Android)
- Swift (iOS Native Development)
- Kotlin (Android Native Development)
- React Navigation (Routing and Navigation in Mobile Apps)
- Mobile UI/UX (Material Design, Responsive Layouts, Cross-Platform Consistency)
- Push Notifications (Firebase Cloud Messaging, Native Push Notifications for iOS/Android)

State Management and Data Handling:

- Redux Toolkit (Advanced State Management)
- Jotai (Atomic State Management)
- Redux-Persist (Persistent State Management)
- AsyncStorage (Local Persistence for Mobile Apps)
- React Query (Data Fetching, Caching, and Synchronization)
- Zustand (State Management in React Apps)

Backend Development & APIs:

- Node.js (Express.js, RESTful APIs, GraphQL APIs)
- AWS (Amplify, S3, EC2, Lambda, API Gateway)
- WebSockets (Real-Time Data Synchronization)
- GraphQL (API Integration for Data Queries)

Database:

- SQL (MySQL, SQLite, PostgreSQL)

- NoSQL (MongoDB, AWS DynamoDB)

Authentication & Security:

- Firebase Authentication (User Authentication, User Management)
- JWT (Token-Based Authentication for Secure Access)
- OAuth (Social Login Integration)
- Biometric Authentication (React Native Fingerprint Scanner, React Native Face ID)

Performance Optimization & Debugging:

- Flipper (Debugging and Performance Profiling)
- React Native Debugger (Memory Management, Performance Improvements)
- Sentry (Crash Monitoring, Issue Tracking)
- Fabric Renderer (Performance Optimization for UI Rendering)
- TurboModules (Faster Data Processing and App Start-Up)

Cryptocurrency Integration:

- React Native Pay (Payment Gateway Integration)
- Coinbase Commerce API (Cryptocurrency Payment Integration - Bitcoin, Ethereum)

Cloud Services & Deployment:

- AWS Amplify (CI/CD Automation, Deployment)
- Firebase (Firestore, Cloud Messaging, Real-time Database)
- Bitrise (Continuous Integration and Deployment for Mobile Apps)

Testing & Quality Assurance:

- Jest (Unit Testing, Test Suites)
- React Native Testing Library (Integration Testing)
- Enzyme (React Component Testing)
- Test-Driven Development (TDD) (Unit and Integration Tests)

Version Control & Collaboration:

- Git (Version Control, Branching, Merging, Pull Requests)
- GitHub (Source Control, Versioning, Collaboration)
- Bitbucket (Version Control, Collaboration)

Development Tools & Platforms:

- Xcode (iOS Development and Debugging)
- Android Studio (Android Development and Debugging)
- Expo (React Native Development Platform)
- Sentry (Error Tracking, Crash Monitoring)

Project Management & CI/CD:

- Jira (Agile Project Management)
- Trello (Task Management, Agile Workflow)
- Fastlane (Automated Deployment for iOS and Android)

Payment Systems Integration:

- Stripe (Payment Gateway Integration)
- Apple Pay (Mobile Payment Integration)
- Google Pay (Mobile Payment Integration)

Mobile Development Best Practices:

- Test-Driven Development (TDD)
- Behavior-Driven Development (BDD)
- Clean Code Principles
- Code Reviews and Mentorship