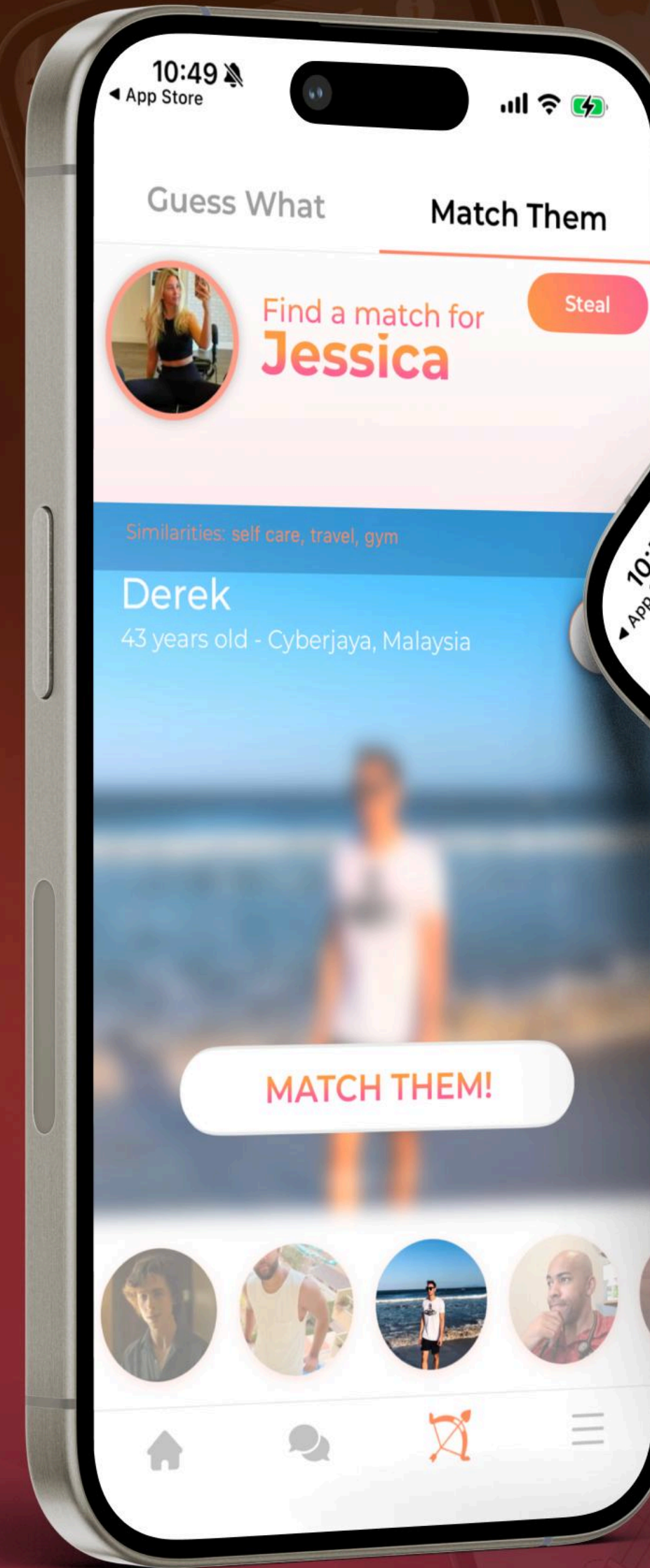


CASE STUDY

Mobile Dating Platform Takeover & Scaling



Rescuing and Rebuilding a Global Dating Platform for Long-Term Scale

When the founder of a fast-growing dating application needed to stabilize a codebase that was slowing down development and inflating costs, they turned to NUS Technology. What began as a takeover and issue-resolution engagement evolved into an ongoing technical partnership, with NUS serving as the engineering team behind the app's continued growth across iOS and Android.

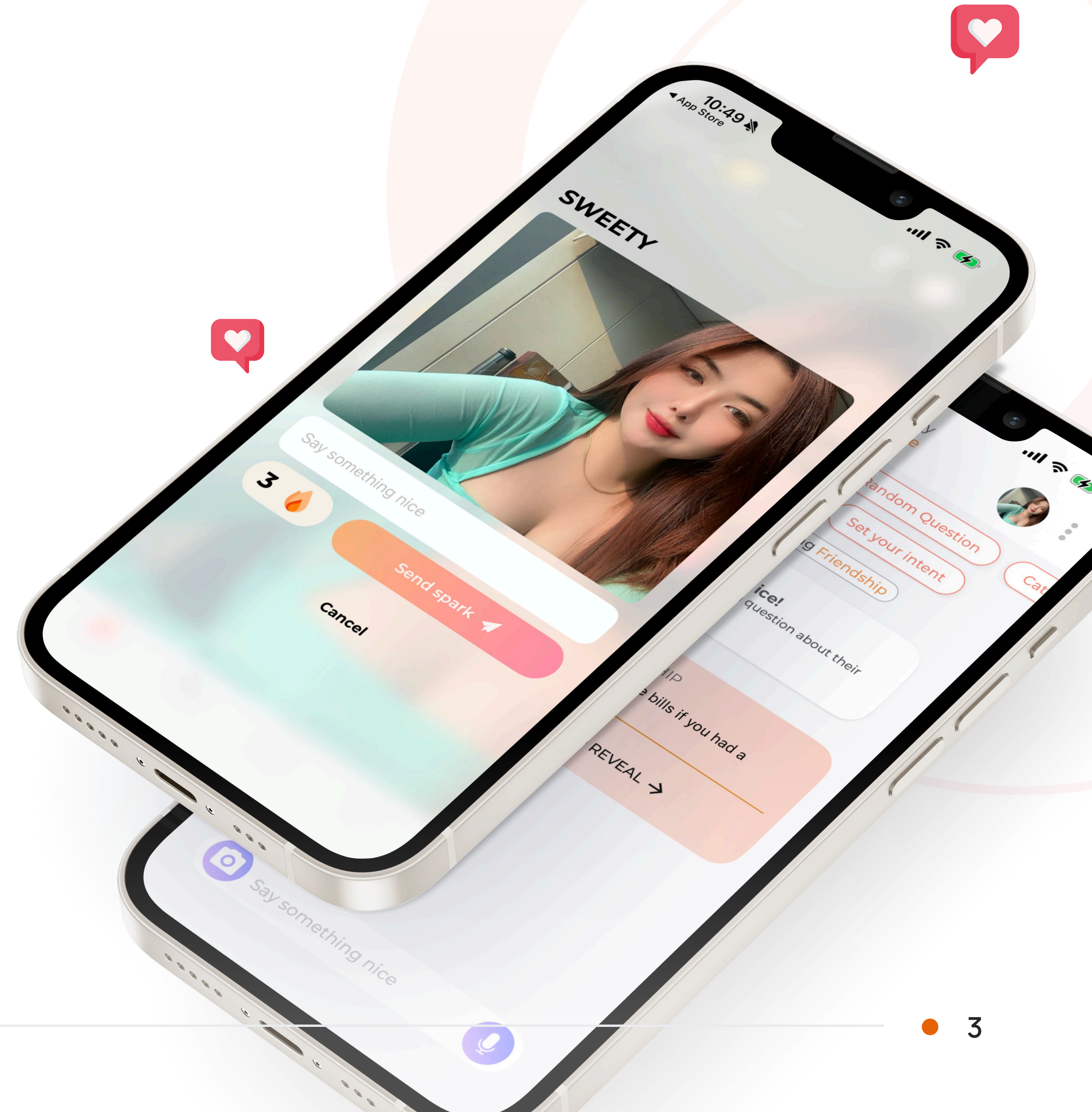
- Industry
Social Networking / Dating App (B2C)
- Market
Global (iOS & Android)
- Frontend
React Native
- Backend
Firebase (Firestore, Functions, Storage, FCM)
- Database
Firestore (Real-time)
- Infrastructure
Firebase, Google Cloud
- Integrations
RevenueCat, Amplitude, Branch, Sendbird (migrated to Firebase), Notifee, HealthKit



THE CHALLENGE

A Growing App Outpacing Its Own Architecture

The application had gained meaningful traction in the market, available on both the App Store and Google Play with an active, global user base. But under the surface, the technical foundation was straining.





- **Inherited Technical Debt:** The existing React Native codebase had accumulated significant technical debt. Outdated dependencies, inconsistent patterns, and fragile integrations made every new feature release a risk.
- **Escalating Third-Party Costs:** The app relied on Sendbird for its real-time chat functionality, a core feature for any dating platform. As the user base grew, Sendbird's usage-based pricing escalated to a point where the cost was no longer sustainable for the business.
- **Fragmented Tooling:** Analytics, notifications, in-app purchases, deep linking, and remote configuration were handled by separate services with little cohesion, creating a brittle stack that was difficult to debug and maintain.

The founder needed more than a “dev shop”; they needed a partner to take ownership of the existing system, resolve its immediate issues, and architect it for sustainable growth, without disrupting the live user experience.

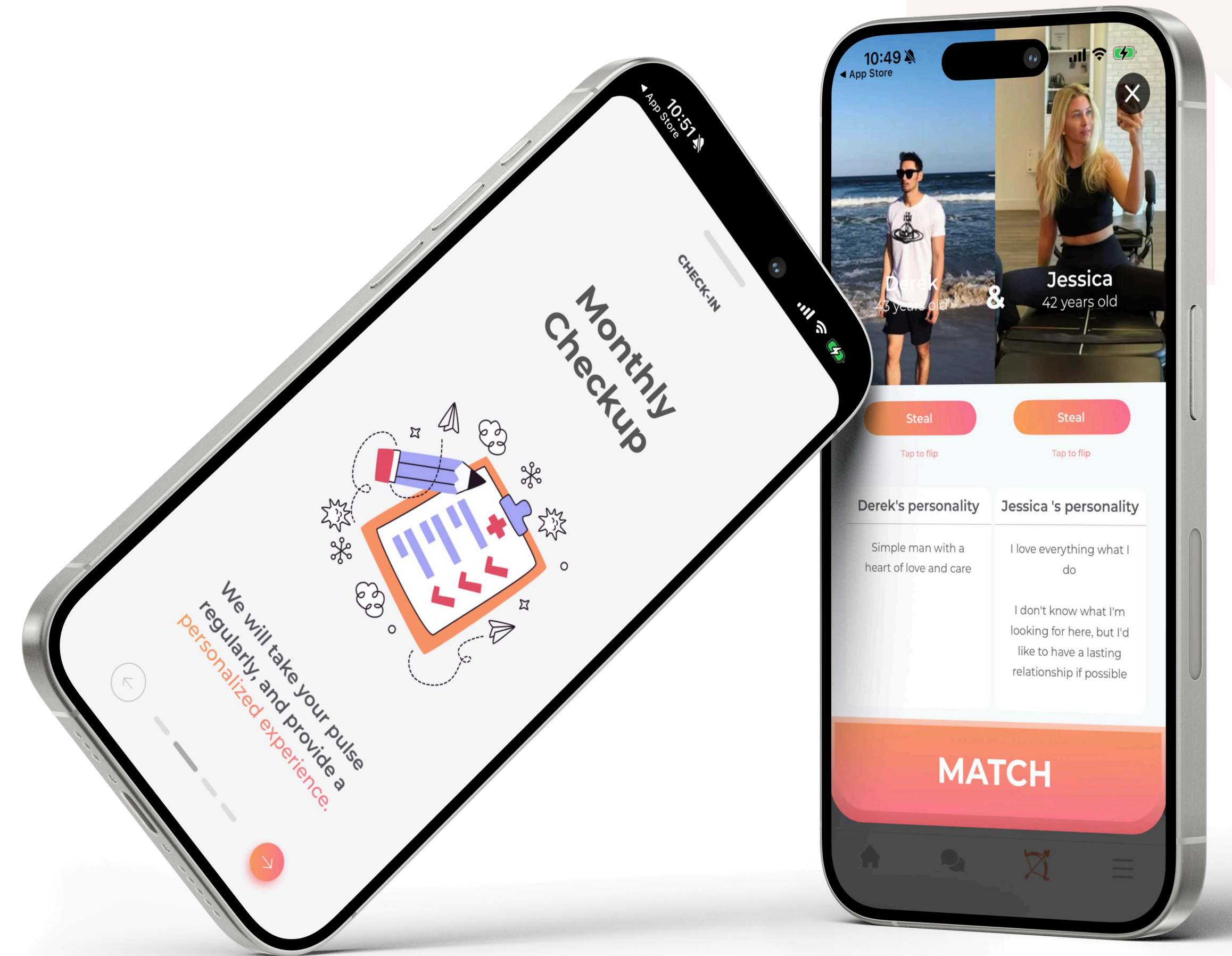
THE SOLUTION

Taking Ownership and Engineering for the Long Term

NUS Technology assumed full responsibility for the mobile application, treating it not as a series of isolated tasks but as an operations platform that needed to be stabilized, rationalized, and then scaled.

Codebase Takeover and Stabilization

The first phase focused on a thorough audit of the React Native codebase. NUS identified and resolved critical issues, performance bottlenecks, crash-prone modules, and dependency conflicts, to bring the application to a stable, releasable state. This wasn't a cosmetic fix; it required deep understanding of the existing architecture and a methodical approach to refactoring without breaking live features.

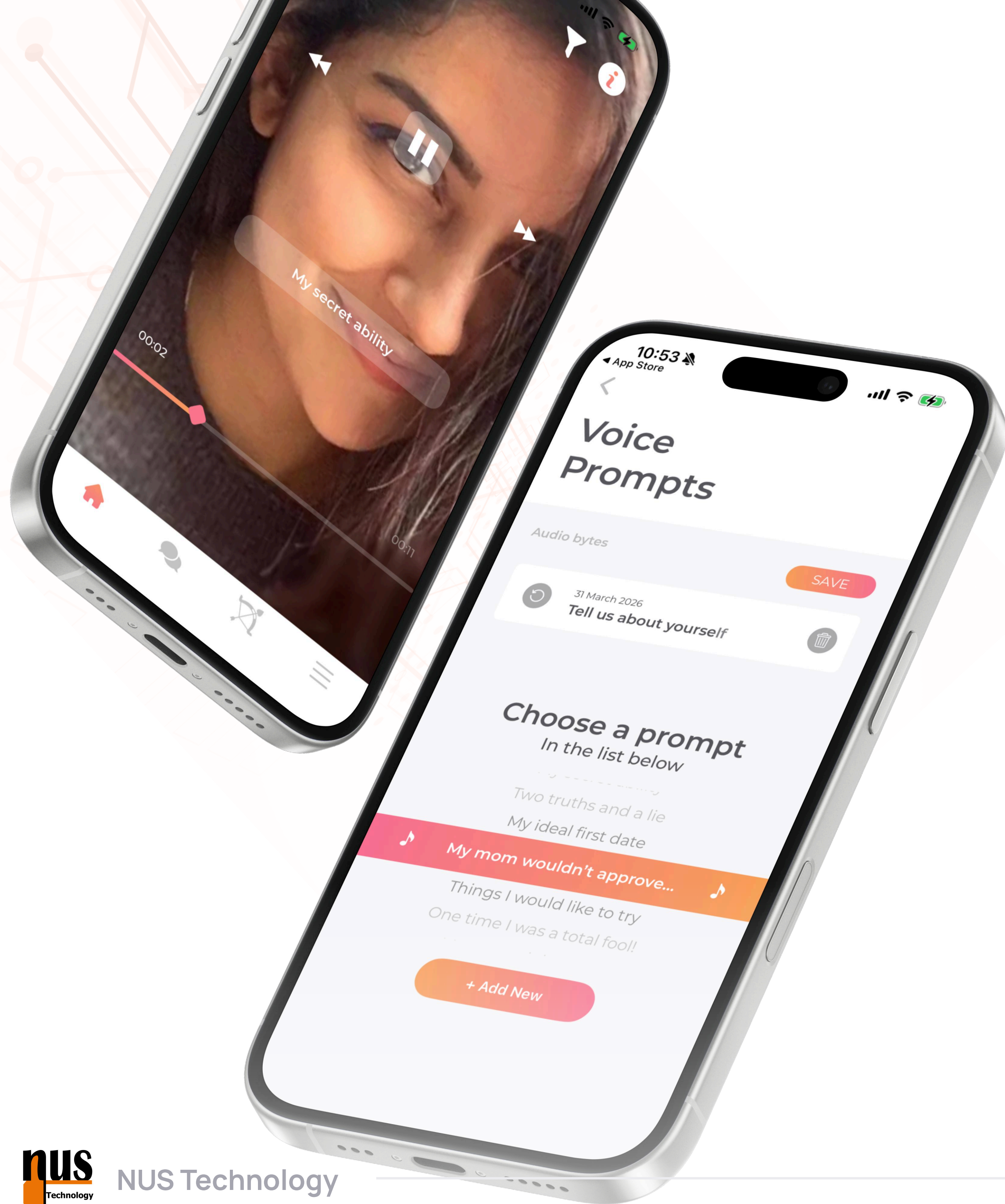


Replacing Sendbird: Building a Custom Chat Engine

The most significant technical initiative was the migration away from Sendbird. NUS designed and built a complete replacement chat system using Firebase Firestore for real-time data storage, combined with Firebase Functions for backend logic and push notification delivery through FCM.

The result was a fully functional, real-time messaging system that matched Sendbird's capabilities while dramatically reducing ongoing operational costs and giving the client full ownership of their chat infrastructure. This shift also eliminated a critical vendor dependency, allowing the team to extend and customize the chat experience without third-party constraints.

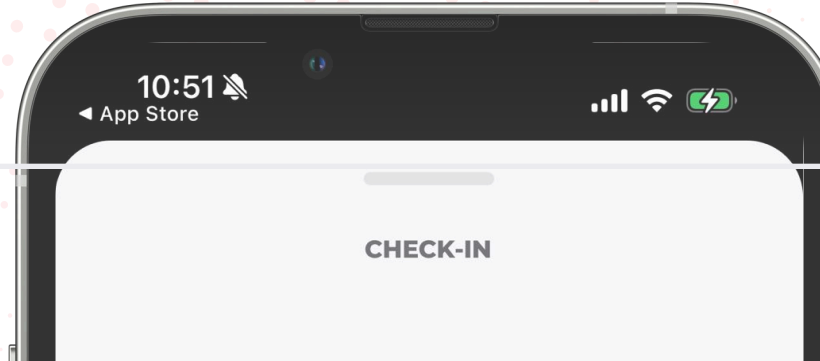
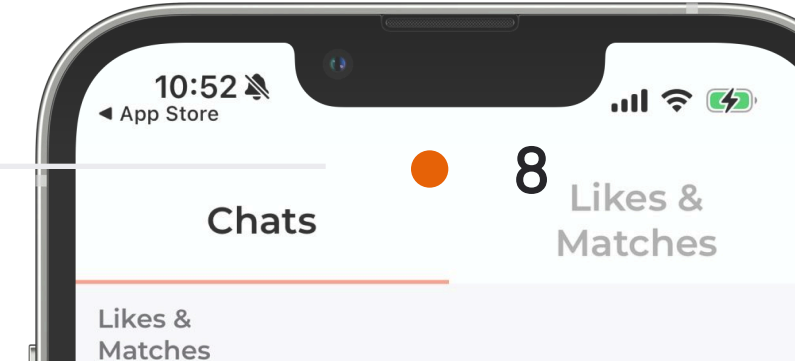
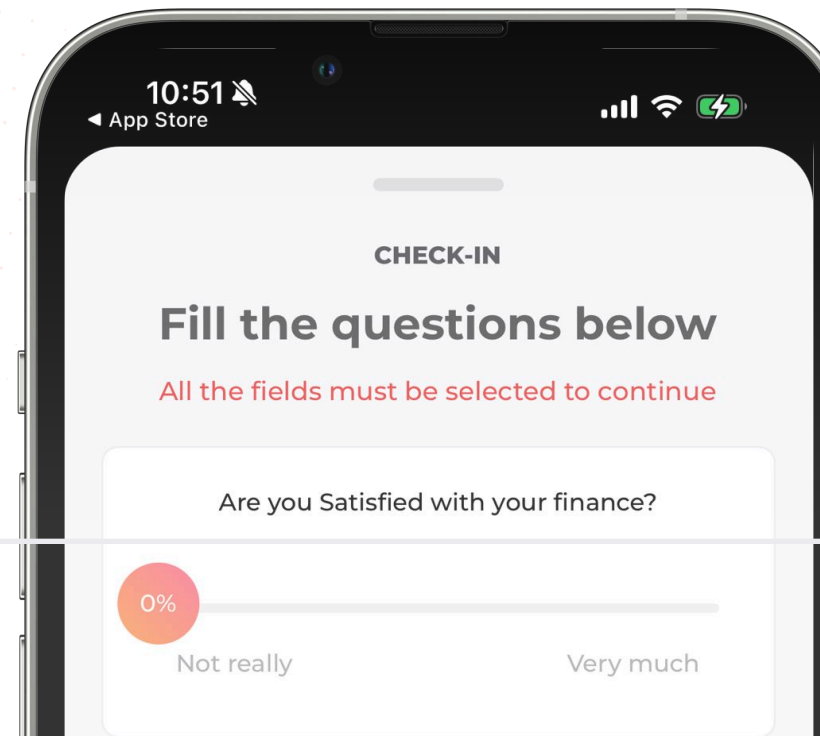
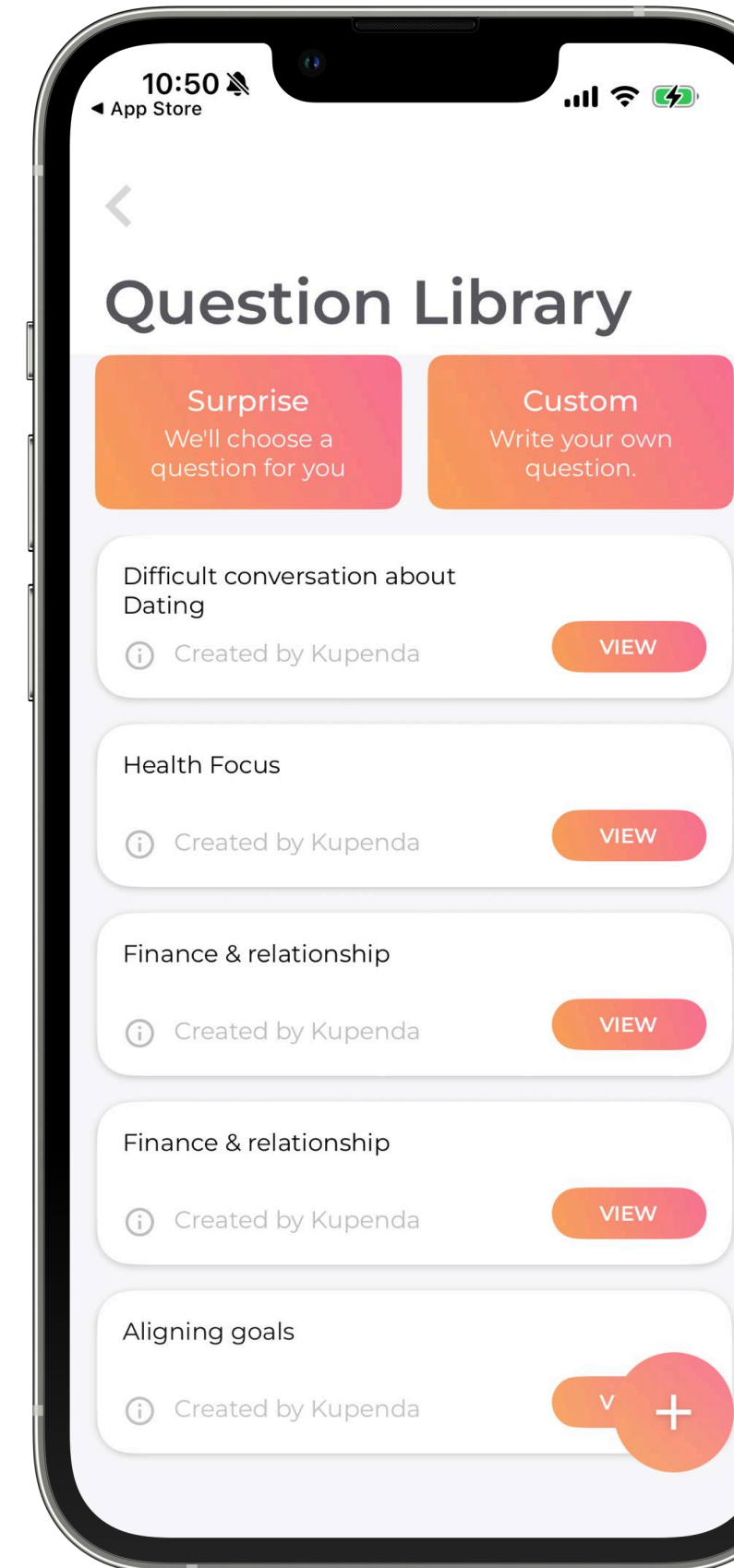
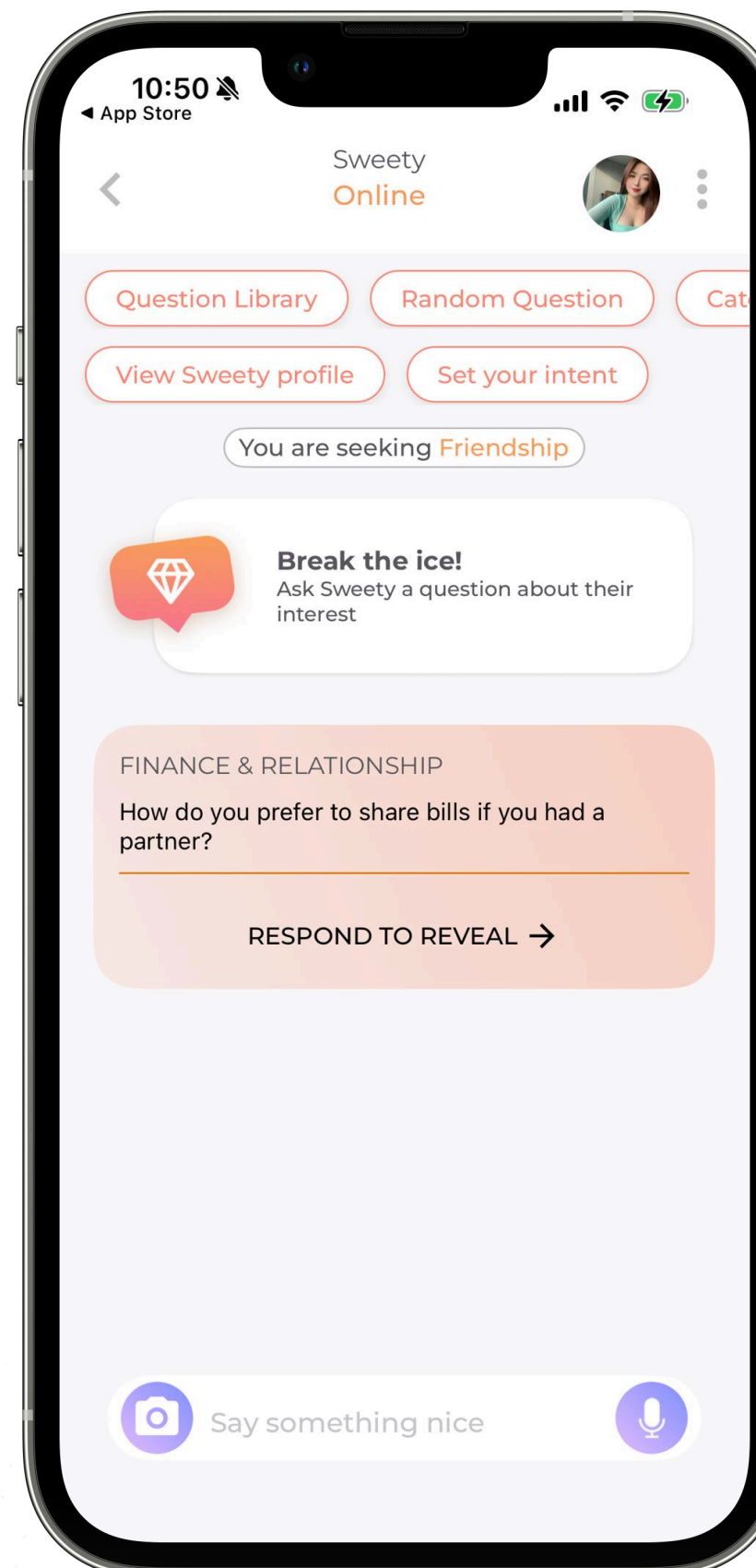
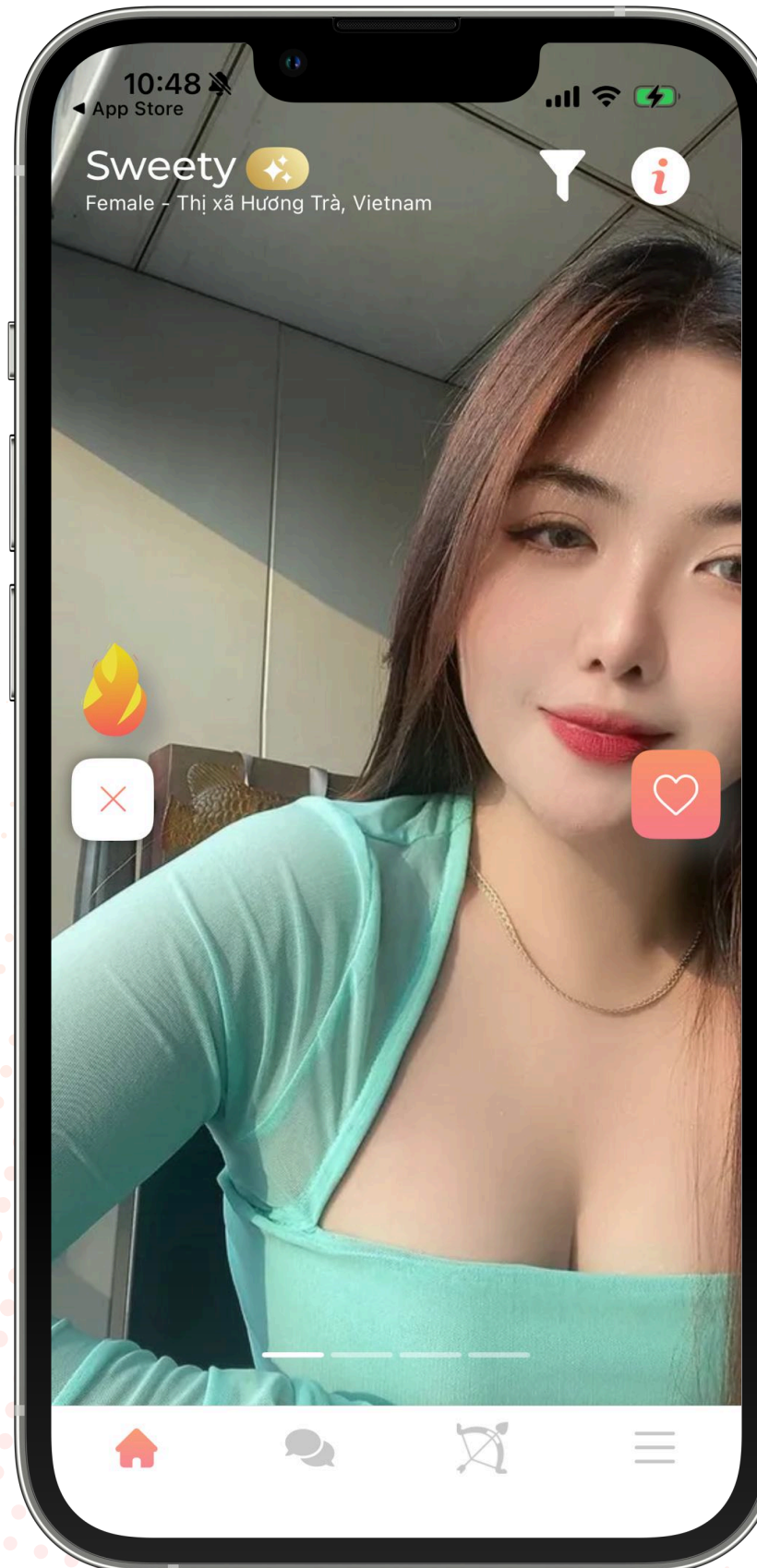
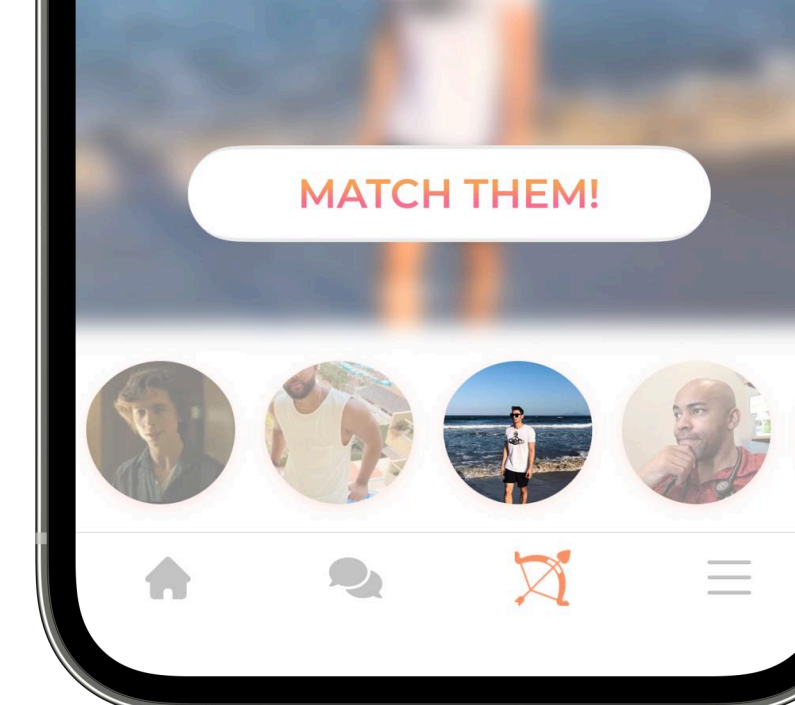
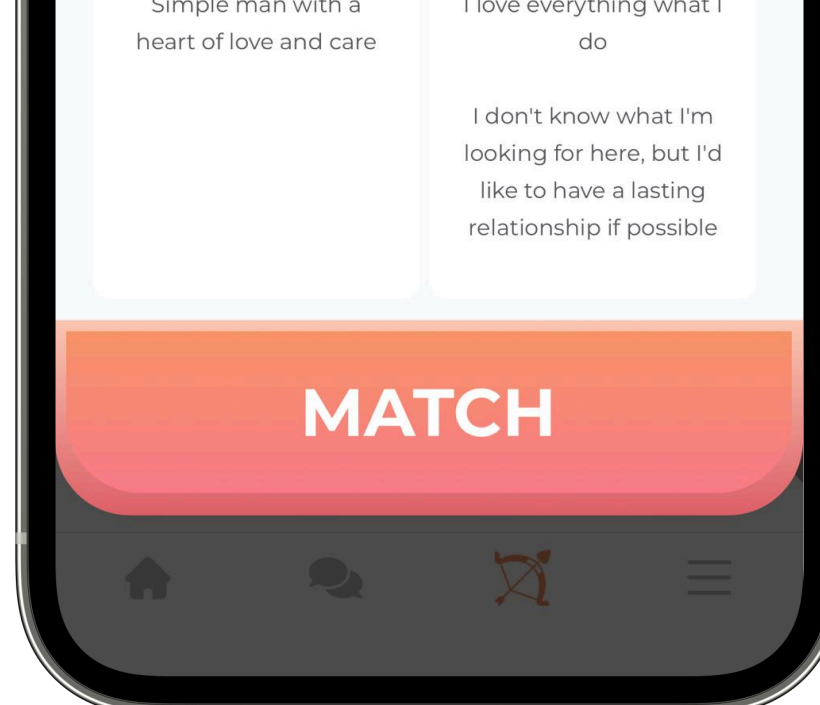




Orchestrating a Complex Integration Ecosystem

Beyond chat, NUS unified and maintained the full suite of third-party services that power the app's daily operations:

- **RevenueCat** for managing in-app purchases and subscriptions across both App Store and Google Play, handling complex entitlement logic and purchase restoration.
- **Amplitude** for user behavior analytics and conversion tracking, providing the data foundation for product decisions.
- **Branch** for deep linking and install attribution, ensuring users are routed to the correct in-app content from external sources.
- **Firestore Remote Config** for feature flagging and over-the-air configuration changes, enabling rapid experimentation without app store update cycles.
- **Notifee + FCM** for a robust, cross-platform notification system with support for grouped notifications, custom sounds, and interactive actions.



Software That Bends to the Process

Dating apps require highly specific user experience flows: profile discovery, matching algorithms, real-time chat, media sharing, and nuanced privacy controls. NUS didn't force the product into a generic framework. Instead, the team modeled these real-world interactions into the architecture, using Shopify's FlashList for buttery-smooth scrolling through profile feeds and Redux Toolkit for predictable state management across complex, interconnected screens.

THE RESULT

From Firefighting to Forward Motion

The transition from a fragile, vendor-dependent codebase to a unified, NUS-maintained platform delivered measurable results:



Chat Cost Reduction

By replacing Sendbird with a custom Firebase-based chat engine, monthly messaging infrastructure spend dropped by roughly 60%. The savings were redirected toward product development and user acquisition.



Feature Delivery Speed

Shipping a feature update previously took 4–6 weeks due to dependency conflicts and regression risk. After stabilization and architectural cleanup, the team reduced that cycle to under 2 weeks, a 3× improvement in iteration speed.



Release Quality

The codebase audit and refactoring effort cut the number of critical bugs reaching production by 45% within the first three release cycles, reducing emergency hotfixes and improving app store ratings.

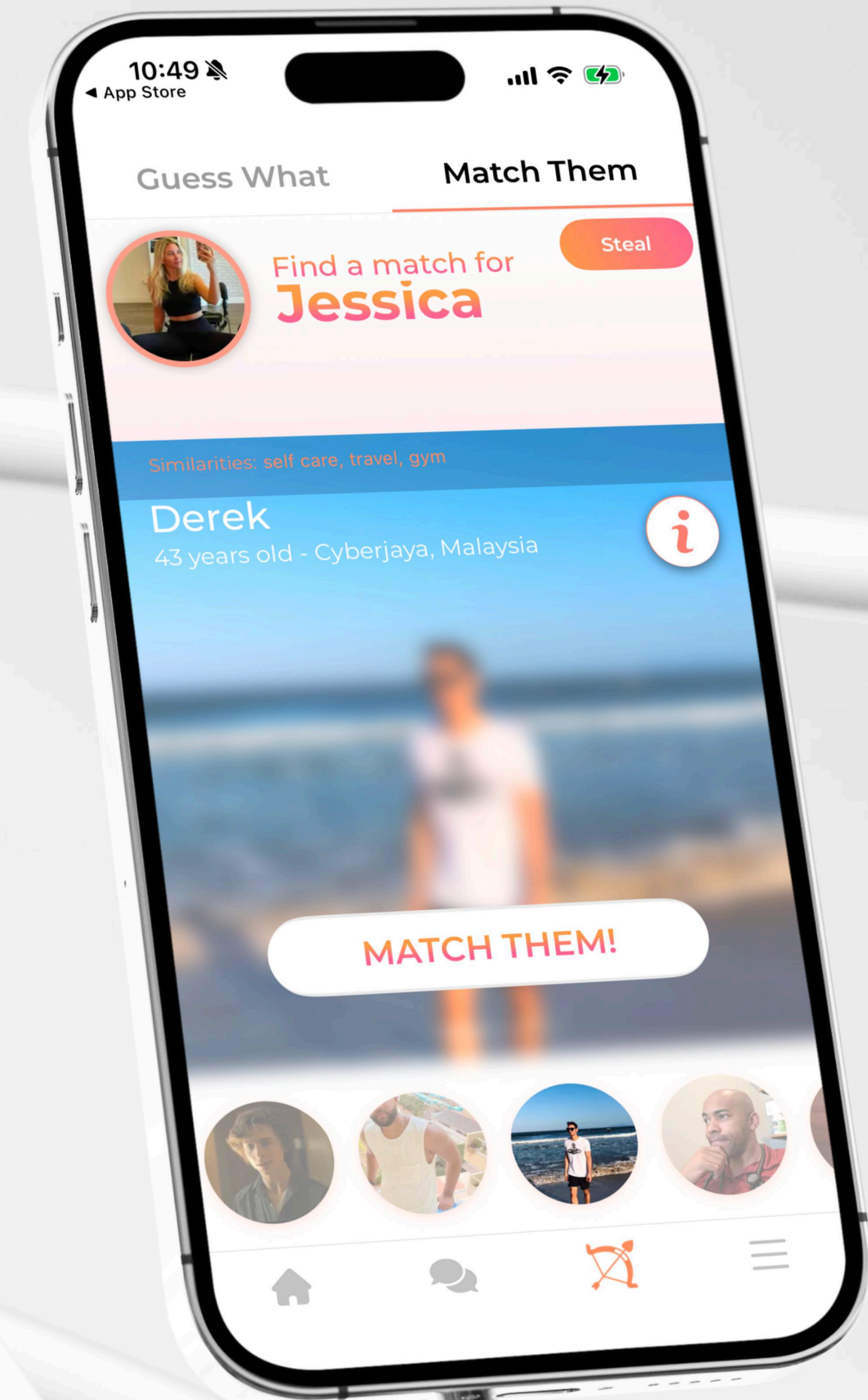


Chat System Reliability

The custom-built messaging system maintained 99.5% uptime in its first six months of operation, matching the reliability of the third-party solution it replaced, at a fraction of the cost.

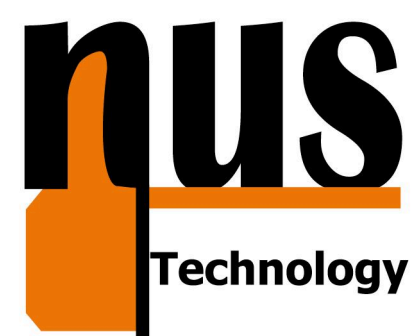
The NUS Difference: We Build It, We Run It

NUS Technology didn't arrive as a contractor to close a ticket queue. The team stepped in as a long-term engineering partner, taking over a struggling codebase, making the hard architectural calls (like replacing a core vendor mid-flight), and continuing to maintain and evolve the platform as the business scales. For this client, NUS is the engineering team: building, running, and scaling the system so the founder can focus on growing the product and the community.



THANK YOU

For Reading Our Case Study



Contact Us

 Website
<https://www.nustechnology.com/>

 Office Address
Level 3 & 3B, Scetpa Building, 19A Cong Hoa Street, Bay Hien
Ward, Ho Chi Minh City, Vietnam

 Email
info@nustechnology.com

 Phone Number
+84 28 6296 7087

NUS Technology