

Memory Surf: The Surfing App

A Senior Project

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by

Lorenzo Sison

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## 1. Introduction

Surfing has a very special place in my heart—my dad taught me, my younger brother, and my younger sister at a young age. Since then, the sport has deeply enriched my appreciation for nature and allowed me to better connect with friends.

One late afternoon I was sitting in the water on my board with two of my best friends, watching the rich sunset colors melt into the water; a sea otter was floating on his back next to us, cracking a shell open on his stomach. Then, suddenly, a few feet away, we saw a pod of dolphins leap out of the water one after the other. Experiencing that beauty alongside my best friends brought me to tears. I was so thankful. Surfing constantly creates thrilling and joyful experiences—from being shot through a glassy barrel of water, to watching a beautiful sunset alongside friends as a pod of dolphins majestically bobs in and out of the water only a few feet away.

As I spent more time surfing and moments like these began to accumulate, I had a problem—the beautiful memories from each session blended together, and key details from each session were forgotten. I raised my problem to surfers across the Bay Area, San Luis Obispo, and online, hoping that someone had a solution. Some virtual surfing journal or website to capture my highlights from each session. I discovered many surfers had the same problem but were lacking a solution.

There are a handful of well-designed, useful surfing apps today. Although they serve the same customer, they address a different problem—these products are data-driven and primarily used to forecast surf reports rather than capture memories from surfing sessions.

This realization set me off on a path to developing Memory Surf—my app for the surfing community designed to capture beautiful surfing moments, encourage people to surf more often, and deepen each individual’s connection with the surfing community.

## **2. Product Overview**

After a surf session, quickly note the break, board, conditions, and friends who surfed that day. Over time your journal will populate with all your sessions—offering you rich data about how the waves break at your favorite beaches during specific times of the year. Additionally, you’ll have the option to list who you surfed with, any wildlife you spotted during the session, or other memorable moments. The journal will act similarly to a photo memory book because each session will have a story behind it. Version 1.0 of that app will be limited to a list and calendar view, offering great value to the surfer while relatively easy to implement.

### *2.1 Example User Flow*

Becca surfed the last two days and knows there’s an achievement in Memory Surf for going three days in a row. So she opens the achievements page in Memory Surf and sees she’ll receive 10 points and a new background for her social media share card if you go surfing for the 3rd day in a row.

Becca texts 3 of her friends and decides to go surfing for sunset that day. After an exciting surf session with her three friends, Becca dries off, kicks back in her car, and opens Memory Surf in the Safari app on her iPhone. She taps the plus icon to create a new entry, then taps the mic icon to begin recording a voice memo. Becca spends 2 minutes describing the highlights from the surf session, then drives home.

The next day she’s lying in bed, opens Memory Surf, and listens to the voice memo she recorded the previous day. After using the voice memo to refresh her memory,

Becca fills in the open fields on the app—wave size, wind conditions, board rode, friends from the session, and wildlife spotted. Finally, she uses the free notes section to add she got barreled in two incredible waves.

Becca tags the friends she surfed with in her Memory Surf entry—they get a notification from the app and import the entry she created directly into their Memory Surf account; they edit some minor details because they rode different boards and didn't catch any barrels.

The waves were pretty big, and it was a fantastic session, so Becca wants to share with your friends on Instagram. She taps the share icon next to her entry in Memory Surf—customizes her Instagram story share card design, including the background image and the details to show on the post. Next, Becca taps the download button to add the image to her photos library, then shares the photo to her Instagram story.

Finally, she checks the friends surfing leaderboard and sees she's only behind Alex (one of her surfing friends) by 15 points. So, Becca returns to the achievements page to find which achievement she should target next to pass Alex up.

### **3. Competitive Analysis**

The current market landscape for surfing apps includes two categories—solutions that serve a different customer and solutions to a different problem. Surfline is the most popular surfing software but serves the need for surf forecasting rather than documentation. Dawn Patrol, another popular surfing app, collects live data from your session, such as how many waves you caught and how fast you moved on each wave. Strava and Apple Fitness champion similar solutions to Memory Surf by including social and game mechanics to drive engagement. However, each caters to athletes indulging in

a broad array of different sports rather than focusing on surfing—depriving surfers of the features they need.



Figure 1: Competitors to Memory Surf

Dive logbooks represent a low-tech solution well-aligned with Memory Surf by allowing you to record and preserve your diving-related memories. Like surfing, scuba diving affords divers rich memories of incredible experiences with unique underwater discoveries and encounters. Recall the highlights of your dive session weeks, months, and years later by recording them in your dive log.

## 4. Design and Implementation

### 4.1 Low-Fidelity Wireframes

After gathering data from surfing communities across the Bay Area and San Luis Obispo to pinpoint the problem, the divergent brainstorming process was leveraged to collect a broad range of potential solutions. Next key features were strung together into low-fidelity wireframes. Finally, the wireframes were used to create the context for the

user testing group to gather meaningful insights used to shape the final feature list and interface design.

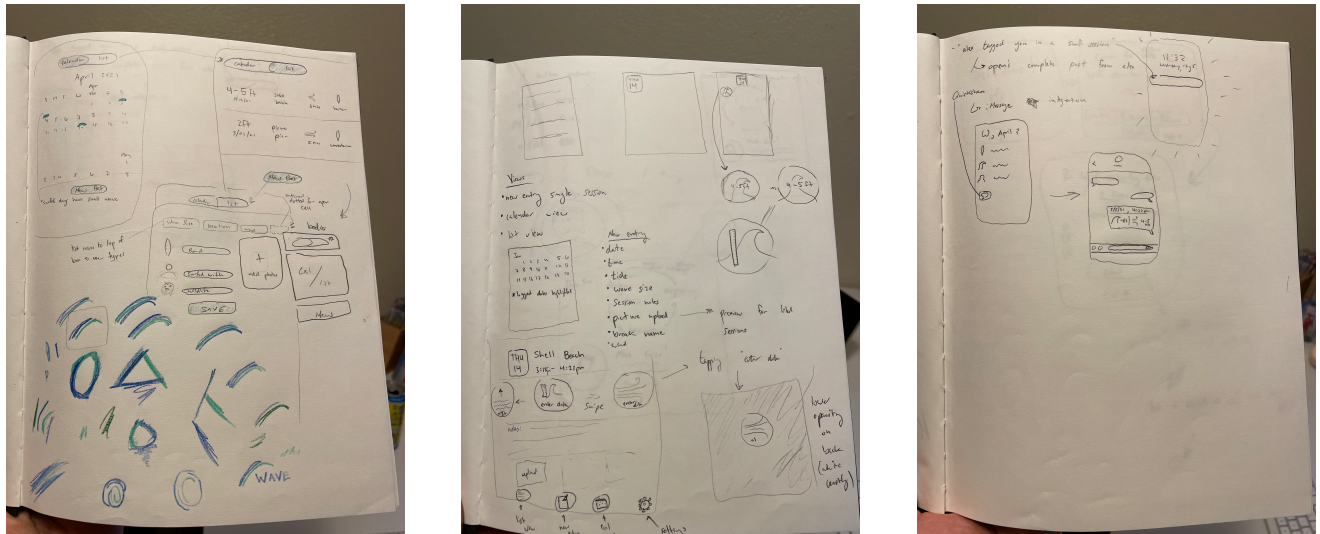


Figure 2: Low-Fidelity Prototypes

#### 4.2 Refined Feature List

User testing revealed the data surfers sought to capture from their sessions and quantified their phone use habits before and after sessions. UX workshops leveraged Cal Poly UX students to refine the interface design—emphasizing the simplicity of the home screen, labeling with icons rather than text, and adding additional screens to limit the volume of fields per screen, thus limiting user fatigue. Using the data, a team of UX students decided a voice memo feature would be the simplest way for surfers to capture the highest quality session reviews.

### 4.3 Medium-Fidelity Wireframes

During the medium-fidelity wireframe sprint, additional screens and interactions were developed to finalize the user experience before the complete prototype was developed in Figma.

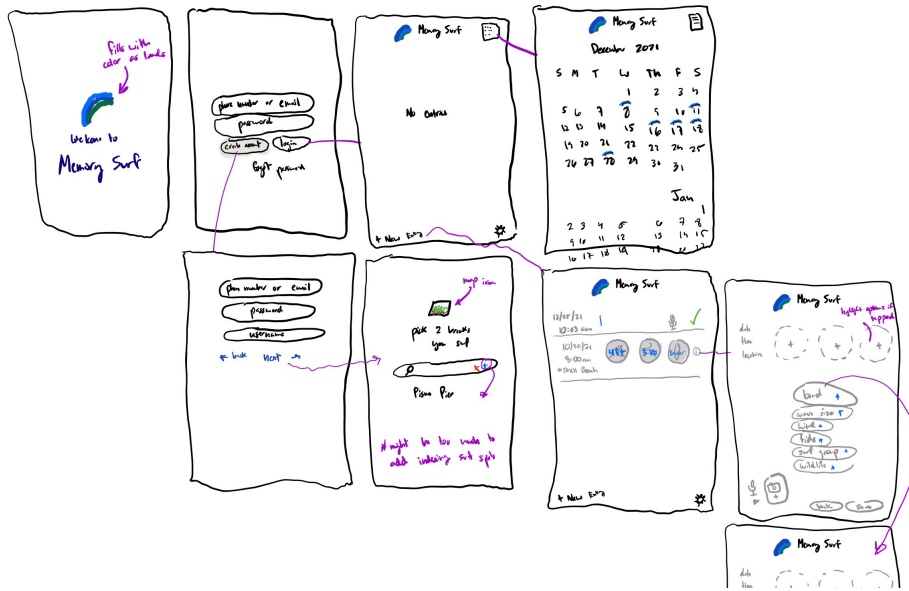


Figure 3: Medium-Fidelity Prototypes

### 4.4 Developer Recruiting

Developer talent was scouted at CIE Startup Weekend, Pitch2Programmers, and across engineering outsourcing companies external to Cal Poly. Business requirements and technical specification documentation were written to outline the vision for the Memory Surf app, the value proposition, market landscape analysis, in-depth feature list and development parameters.



#### *4.5 High-Fidelity Prototype*

Precisely represents the finalized v1.0 product in an interactive iPhone prototype accessible via the browser of any device.

### [High-Fidelity Prototype](#)

## **5. User Experience Foundation and Testing**

### *5.1 User-Centered Design Process*

The user-centered design process consists of multiple phases where creators target designs catering to user needs (The Interaction Design Foundation, 2021). The technique often leverages data through surveys and interviews, then connects the dots via brainstorming. User-centered design phases typically include context, requirements, design, and evaluation. The development team then iterates through the phases until the goal is met during evaluation. Design teams cater to as many perspectives as possible during the testing process.

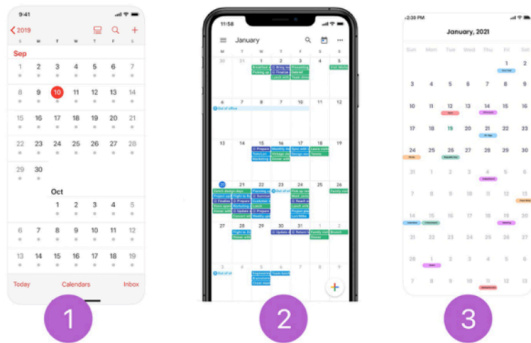
### *5.2 Speaking the User's Language*

Speaking the user's language is a design practice that ensures the product will be understood by the target user. Development teams commonly fall into the trap of using technical vocabulary as product-related terms become second nature when wholly consumed in the development process. As a result, many designers assume the user maintains the same pool of knowledge and builds a poorly designed product.

### 5.3 User-Centered Design Testing

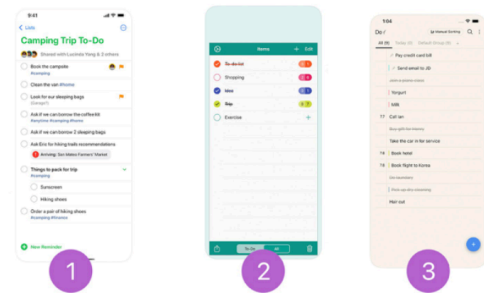
The Memory Surf testing protocol leveraged a survey to pinpoint user behavior with phones after surfing, the most relevant features for the app, and familiarity with similar app designs. The survey revealed that most surfers use their phones after drying off, some take pictures and video while surfing, and use Google Calendar and Apple Reminders.

Which calendar look do you like best?



- 1
- 2
- 3

Which list look do you like best?



- 1
- 2
- 3

Figure 4: Interface Design Survey Screenshots

The study included surveying surfers in San Luis Obispo to more deeply understand the features and user experience desired in a surfing journal app. The survey started by asking questions that determine the participant's experience with surfing, thus providing a metric for the value of the data extracted from that given participant. Survey data from individuals who have less experience with surfing is less impactful on

the final development because they do not understand the surfing experience as thoroughly. Furthermore, the survey determined the value of various features—asking participants when they usually interact with their phone after a session or if they take pictures at the beach. The conclusion of the survey gauged journal and list design apps design that participants already enjoy providing high-level design guides for Memory Surf.

Although I surveyed individuals with varying degrees of surfing experience, I expected most to engage with their phones almost immediately after drying off. I believed a smaller portion of the participants would take photos or videos at the beach during or after a surf session. Google Calendar is the most popular calendar app among my peers, so I expected its design to be voted most desirable. I also expected Apple Reminders to gain the most traction on the list view question in the survey.

The survey results showed that 83% of participants used their phone immediately after drying off—suggesting a rich opportunity to create a journal entry after a surf session while the memory is fresh. About 17% took pictures or videos at the beach for a surf session, and 67% did so on occasion. This data point implies that adding a photo and video attachment feature would be welcomed but not necessary—however the feature was included in the v1.0 of Memory Surf.

After development was completed, the high-fidelity Figma prototype was reviewed by participants from the initial survey. Although the prototype was well-accepted by the initial pool of participants, the surfers wanted additional features included with Memory surf, such as the option to view their sessions from a map perspective and the list and calendar views. Therefore, the data was collected into a

Memory Surf v2.0 archive and will be implemented into a new prototype and further tested in the future.

## **6. Interdisciplinary Connections**

Experience in graphic design and user experience design provide the groundwork for creating a beautiful yet straightforward app that brings surfers great joy. The app's root is documenting a surfer's career story, so experience in digital storytelling and branding allows for pinpointing a solution and a plan to help as many surfers as possible through effective marketing. Hardware and software engineering experience allow for more effective collaboration with a developer, an effort that is further enhanced by a background in iOS app development via Swift. Additionally, understanding technical documentation such as specifications makes learning product-relevant subjects easier, which strongly impacts the development and achievement of the product vision.

## **7. Sources of Inspiration**

The iOS Photos app successfully allows users to create and remember the most impactful stories of their lives. However, the app is general and focused on capturing photos rather than data points relevant to surfing. The data points targeted in Memory Surf will be far balanced between audio, text, and occasionally photos.

The Surfline app lists accurate surfing data such as wind, tides, and surf size. However, the app focuses on current and future conditions rather than past ones. Additionally, the app doesn't aim to create a story personalized to the user.

The iOS Fitness app includes both list and calendar views of past workouts and provides users with relevant data points. It differs from Memory Surf because it targets a

general audience rather than providing richer data in a focused channel similar to the photos app.

## **8. Launch Roadmap**

Memory Surf is on-track to become the most popular surfing app globally and to rise to challenge the biggest surfing brands.

A developer from a partner outsourcing firm has received the business requirements doc, technical specifications, and fully-functional Figma prototype. I'm conducting regular meetings serving as product manager of the Memory Surf browser development project. User insight from the Memory Surf browser app launch will be gathered to drive the iterative user-centered design process, ultimately leading to a refined feature set and native iOS and Android apps.

The Memory Surf marketing roadmap consists of digital branding via a company website and social media handles. Traffic from the social media pipeline will be used in parallel with a Memory Surf sponsored athlete program. Each campaign layer complements the product's rooted design for young surfers—social media share cards, achievements, and global leaderboards. Finally, Memory Surf will partner with existing surf brands to sponsor surfing-themed events spearheaded by sponsored athletes and top members from the global leaderboard.

Surfing beautifully aligns humanity and nature but is far outdated in terms of technology. As a Liberal Arts and Engineering Studies major, I'm thrilled to build a product that bridges the gap between cutting-edge technology and surfing's existing balance between the spirits of humanity and nature.

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