**Cellphone Rangefinder Application**

**1. Overview**

**Client/Company:** Ximity

**Duration:** August 2023 – October 2023

**Tools Used:** Corel Draw, Photoshop, Adobe Illustrator, Adobe XD, Figma.

Role: Graphic designer (logo, branding materials), UX/UI Designer, website development (HTML, CSS, JS)

**2. Objective/Problem Statement**

The client wants to create a cell phone range finder app that matches the precision of traditional laser-based devices. From a UX/UI standpoint, the challenge was to design an intuitive interface that simplifies two-step distance measuring processes, ensuring users can easily access and understand accurate measurements.

**Persona**

**3. Research**

**High-Level Interview with Principal Engineer:**

**Objective:**

To grasp the basic principles of the mathematical algorithm behind the technology.

**Process:** Set a clear goal to understand the technology at a high level. I asked the Principal Engineer to explain the algorithm's foundational concepts and logic. Summarized and documented the main principles discussed.The main aim was to gain a high-level understanding of the technology's mathematical basis from the Principal Engineer.

**Competitor Analysis:**

**Method:** Reviewed existing range finder apps and laser-based tools on the market.

**Key Findings:**

1. There is no app, aiming to use the same technology. Because the product will be unique, there might be UX/UI solutions never used before.
2. Most apps lacked intuitive interfaces, making it difficult for users to understand the process and measurements.
3. Few competitors incorporated augmented reality, which could enhance precision and user trust.

**Potential User Interviews:**

**Method:** Conducted **one-on-one interviews** and created **Affinity Map** with experienced users of range-finding devices, measuring tools, and potential users who regularly use range-finding tools. The focus group included army veterans, architects, golfers, hunters, builders, users of other similar apps, and people with little to no experience with such devices or applications.

**AFFINITY MAP**

**Key Findings:**

1. Many responders expressed doubts about the practical use of the app since there are many devices created especially for range finding, using well-known convenient laser technology.
2. Users want real-time feedback when measuring distances.
3. A common pain point was the difficulty in determining the exact point being measured, especially over long distances.
4. 70% of respondents wanted a tutorial or guide when first using the app.
5. 55% expressed that a visual guide (like a laser point) would make them trust the measurements more.

**4. Logo Concept Review on Zoom:**

**Objective:**

Shared multiple logo concepts with the client, gathered feedback, and finalized the chosen design.

**Platform and Software:** Zoom, Corel Draw, Adobe Illustrator, Photoshop.

**Process:** Organized a presentation deck showcasing the logo concepts.Set the agenda and briefly reaffirmed the project's goals.

**Logo Showcase:** Presented each logo, detailing its symbolism, colors, and how it aligned with the brand's essence.

**Client Feedback:** Encouraged initial reactions, preferences, and concerns from the client for each design.

**Decision & Finalization:** Collaborated to refine or combine elements based on feedback.Upon agreement, finalized the logo the client was most drawn to.

**Post-Meeting:** Finalized and delivered the chosen logo.

**LOGO**

**5. Investor Pitch Deck Preparation:**

**Objective:** To create a compelling and informative deck that effectively communicates the client's business value, vision, and potential return on investment to potential investors.

**Design Phase:** Created visually appealing slides that reinforced the presentation explaining the principles of the technology working at the core of the app.

**Feedback Loop:** Conducted a meeting with the client to refine the deck’s illustrations.

**Finalization:** Incorporated feedback to fine-tune the design.

These illustrations aimed to arm the client with a persuasive tool to effectively communicate the idea to potential stakeholders, increasing the chances of securing investor funding.

**Pitch Deck SLIDES**

**6. Creating a Basic Interface to Test the Technology:**

**Objective:** To design a simplified user interface that allows stakeholders and users to interact with and test the core functionality of the technology.

1. **Understanding Core Technology:** Collaborate with the tech team to gain requirements of the technology to be tested. Define the primary user actions and flow.

**FLOW**

1. **Wireframing:** Draft basic wireframes illustrating the user journey, interface layout, and essential features. Prioritize simplicity.

**UX**

1. **Feedback and Iteration:** Present the wireframes to the client, for feedback. Make necessary adjustments based on the client's feedback.
2. **High-Fidelity Prototype:** Elevate the wireframes to high-fidelity designs, keeping in mind the desired simplicity.

**Variations**

1. **Adjusting the High-Fidelity Prototype According to the Client’s Feedback:** After reviewing the interface designs, the client shared feedback on usability and style. The design was refined to ensure it was both user-friendly and visually appealing. These suggestions were used in the next design update.

**FINAL PROTOTYPE**

**Tools Used:** Corel Draw and Photoshop to interactively create design during Zoom connect with the client for fast feedback, and Adobe XD, to create interactive prototypes that emulate the intended user experience.

1. **Client Approval:** Presented the high-fidelity prototype to the client, walking them through the interface and user flow. Upon agreement, secured formal approval to proceed to the development stage.

**FINAL PROTOTYPE embedded.**

**8. Handoff to Development:**

**Tools Used:** Used Figma's handoff features (switched from Adobe XD because the developers didn’t work with Adobe products) to provide engineers with design specifications, assets, and interactive prototypes. Collaborated with iOS and Android developers, ensuring they understand the design's nuances, interactions, and expectations.

**9. Continuous Collaboration:**

Maintained open communication channels with the development teams during the building phase. Participated in daily standups. Answered questions, clarified design decisions, and reviewed built features to ensure fidelity to the original design.

Usability Testing (with preliminary prototype):

Method: Created a basic prototype of the app and tested it with a group of users.

Key Findings:

Users struggled with determining the start and end points for measurements.

Feedback suggested incorporating haptic feedback (vibrations) as a confirmation of measurement points.

Technology and Limitation Research:

Method: Explored smartphone capabilities, such as camera quality, gyroscope accuracy, and AR technology's potential.

Key Findings:

Modern smartphones' AR capabilities can indeed match the precision levels of many laser-based tools.

However, the app's accuracy might vary across different smartphone models due to hardware variations.

5. Challenges & Solutions

Detail any significant challenges you encountered during the design process and how you overcame them.

6. User Testing & Feedback

Methodology: [e.g., Usability testing, A/B testing]

Key Findings:

[Finding from testing]

[Another observation]

7. Results & Impact

Discuss the impact your design had after implementation. This can be based on metrics, user feedback, or other quantifiable measures. For instance:

"After implementing the redesign, the client saw a 20% increase in user engagement and a 15% decrease in cart abandonment."

8. Reflection & Learnings

Reflect on what you learned from this project, what you would do differently, and any other takeaways.

9. Call to Action

Invite readers to check out the live project, provide feedback, or get in touch for collaboration.

Remember, the most crucial aspect of a case study is storytelling. It's not just about showcasing the final product but emphasizing the journey — the thought process, the challenges, and the solutions. This approach provides readers with a comprehensive understanding of your methods, depth, and expertise.

**Persona 1**

**User Persona:** Mia Rodriguez

**Age:** 28

**Occupation:** Environmental Scientist

**Background:**

Mia is a hiker who spends her weekends exploring trails and national parks. She's passionate about the environment and often documents her hikes, unique landmarks, and their relative distances from one another.

**Goals:**

Accurately determine the distance between two points or landmarks while on a hike.

Plan routes more efficiently based on distance and time.

**Challenges:**

Terrain can make it difficult to estimate distances.

Wants to conserve battery on devices while hiking for safety reasons.

**Quote:**

"I love capturing moments during my hikes, but I also want to know how far I've come or how far a landmark is."

**App Benefits:**

The rangefinder app lets Mia quickly measure distances between landmarks without extensive equipment, helping her plan and document her hikes more effectively.

This persona paints a picture of a typical user who might benefit from a rangefinder outdoors.

**Persona 2**

**User Persona:** Jake Thompson

**Age:** 32

**Occupation:** Interior Designer

**Background:**

A professional interior designer with 8 years of experience. Often works in large spaces and requires a quick way to gauge distances between objects or focal points.

**Goals:**

Determine distances between objects in a room or open space without measuring physically.

Efficiently plan layouts or design elements based on those distances.

**Challenges:**

Manual estimation can lead to design miscalculations.

Wants to quickly gauge distances during client consultations.

**Quote:**

"I need a quick way to determine distances between spaces, without it being a hassle."

**App Benefits:**

The rangefinder app allows Jake to gauge distances using his smartphone, enhancing his design accuracy and efficiency during client meetings.