level up.

Build Essential Skills, One Experience at a Time

CS147 Autumn 2024

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II. Problem & Solution Overview

Problem

Students and early career professionals often face challenges in developing essential interpersonal skills that are critical for career growth. These skills, which are rarely taught in traditional classroom settings, cause stress and uncertainty in navigating one's career path.

Solution

level up. breaks down the challenge of building interpersonal skills into bite-sized experiences across four key areas. With personalized daily challenges, the chance to explore and compete with friends, and tools to track their growth, users are able to develop career-enhancing skills, one experience at a time.

III. Needfinding

Our initial problem scope focused on designing solutions for promoting healthy behaviors, specifically addressing stress caused by over-productivity and competitive environments that demand high levels of achievement. We conducted two rounds of needfinding interviews, recruiting a total of six participants from diverse ages and backgrounds. Participants were either recruited at local coffee shops or through mutual connections. Before conducting the interviews, we obtained their consent, ensuring voluntary participation. To avoid introducing bias and ensure authentic responses, we did not compensate our participants.

Our interview questions were open-ended, aiming to gain insights into the participants' daily routines and identify stress-inducing aspects of their lives. We categorized participants based on their stress levels and how effectively they managed stress. This categorization led us to select an individual with exceptionally controlled stress levels as our extreme user.

Many of our interviewees were students, individuals starting their careers, those between jobs, or people in high-intensity work environments. These participants reported experiencing stress regularly, which often affected their daily lives and routines. One notable extreme user, James, stood out for his heightened awareness of his bodily stress signals—something we did not observe in other participants.

James is highly reactive to changes in his body and attributes any physical flare-ups to stress. His practices align with insights shared by our domain expert, Dr. Luce, a clinical psychologist. Dr. Luce explained that individuals surpass their stress threshold when they begin noticing physical signs of decline. She emphasized that being attuned to one's physical and mental well-being can significantly reduce stress.

Needfinding Interviewees

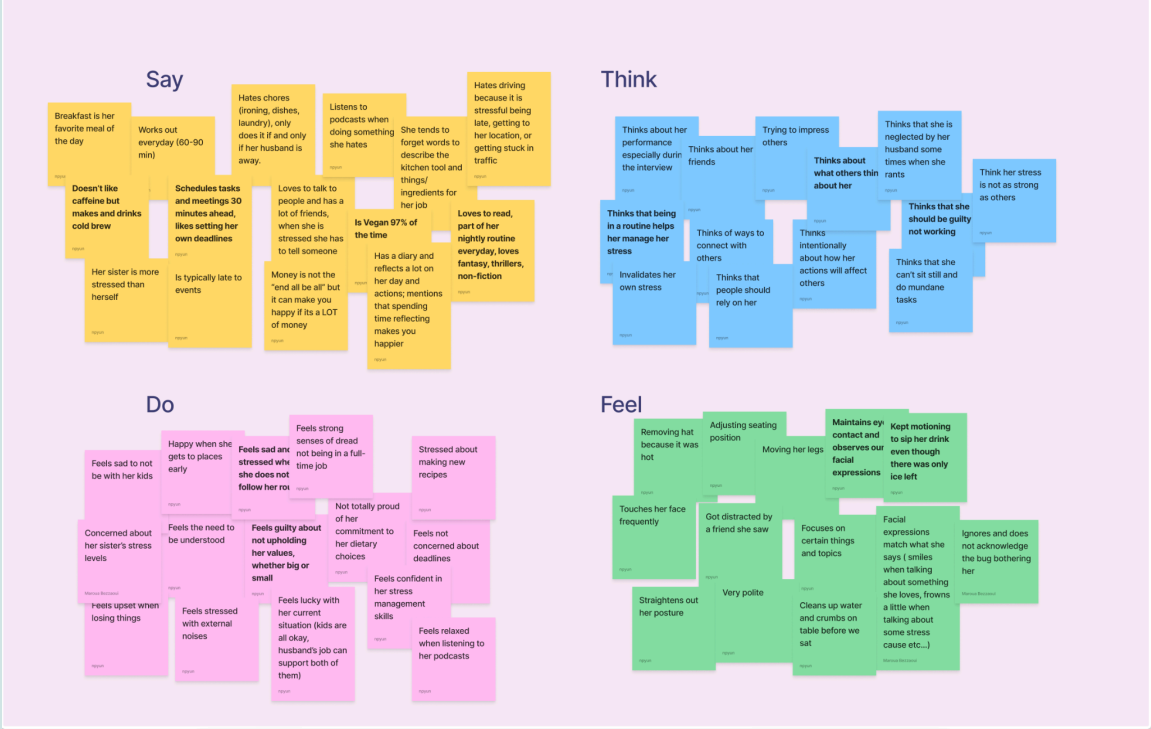
1. **Julie:** A self-employed vegan cooking teacher and married mother of two who has ADD, loves yoga, and is very particular about her health.
2. **Emi:** A 20-year-old Stanford CS major who is stressed about the job market and what to do after college
3. **James:** *[Extreme User]* a 30-year-old man in between jobs who is expecting a kid but is able to manage his stress very well and has it down to a science
4. **Danna:** a high-achieving high school senior with lots of self and peer expectations.
5. **Dr. V:** an interventional radiologist who considers himself a high-strung workaholic who is dedicated and meticulous about his work.
6. **Dr. Luce:** *[Domain Expert]* A licensed psychologist & clinical professor of psychology who understands stress very well and how it relates to people's physical and mental well-being

Result Synthesis

We synthesized our data by creating detailed empathy maps for all six interviews. Then, we identified the most important parts of each empathy map and used these insights to infer needs. Through this process, we discovered the most important needs related to stress in high productivity and high achievement areas, such as starting a career, looking for a job, or working and managing people in industry.

Empathy Maps

Julie:



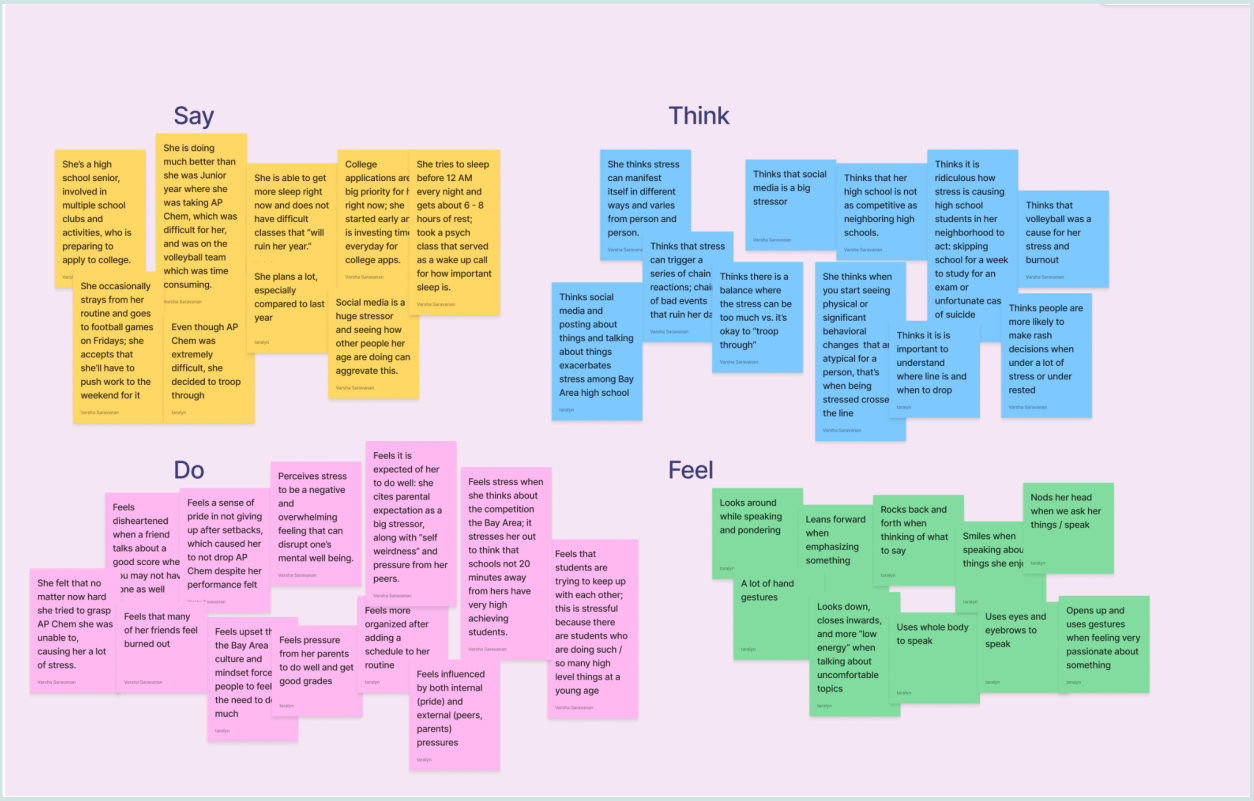
Emi:


Say
She works one to two jobs while being a full time student
In summer, gym was something to look forward to whereas during year, it turns into a task
She blocks off mornings to be locked in to focus on academic work
She said that her stress is internal as no one here is directly telling her to take 20 units
She considers herself to be a very social person and even with a lot of work, she finds time to be social
Summer was very slow and had more time for everything. In the summer, her habits were "pristine" and "ideal" and during the academic year, "stressed college student vibes"
She has a pretty consistent schedule - gym routine, shower, alone time before class, full day of classes + office hours till five
During the summer, there is a general lack of pressure to do things or see people
She said that she's accepted that she is on a different path that she has chosen and does enjoy
Other than weekends, not a lot of downtime
She says that he "home base" during year is at Tresidder. Most people here hav a good home base where they feel they can open up to people.
Knows people with really rough quarters but they seem very chill. Flip side- Knows people with lower workload but are super stressed
She said that she "pavloved" herself into going into work mode if she buys coffee
"lives pset to pset", "shuts down" during midterm and finals
Think
Realizes that what everyone else is doing is not what she needs to do
Considers herself more academically oriented during the year than most people
Thinks there is an inevitable sense of stress because Stanford students are highly motivated people with big goals
Thinks that value you give to something defines stress
Thinks that being alone in mornings give her a designated time to 100% lock in and a good start to her day
Thinks it would helpful to find ways to naturally build anti-stress into routine without making it feel like a task
Has learned that at Tresidder, she may not be fully productive but she can still work while fulfilling
Notices that people who have good coping mechanisms are less stressed
Infers any stress levels at Stanford to silicon valley CS culture where everyone is looking for internship
Thinks that being 85% locked in is worth it, if she's getting to socialize / have social time which is important to her
Believes in the mantra, "struggle now, reward later"
integrate social and academic time otherwise you'll have to cut into one
Thinks there are two types of stress: Active / acute stress is more obvious and apparent. Passive stress accumulates and is something you need get rid of with breaks
Do
She feels lucky that has friend that share her home base
Feels an expectation to "an adult" over the summer
She feels pressured to ge a job despite being pre-med
She feels comfi and a sense of familiarity arou Tressider
During summer, she feels more productive and healthy over the summer
She feels more at peace and relaxed over the summer
She has fun goi to the gym with her friends over summer
e feels more during ever her weekday routines, after hearing advice from a friend ("You can't live weekend to weekend")
She is fulfilled when she has a lot of social and academic stimulation
Stress feels internal, not external at Stanford
Feel
Good eye contact
Occasionally used hand gestures while speaking
Laughed at herself a lot
Open body language, very inviting and warm
Nods her head in agreement with what we're saying, or as affirmation of what she's saying
Smiles a lot as she speaks
Gets louder when she gets excited about what she is talking about
Emphasized and smiled when she mentions words like "coffee," "gym" "Tresidder"
Well spoken and confident voice, freely talked, did not appear to be holding thoughts back
owed down to match the cadence of the topic she's talking about

James:


Say
Inbetween jobs
He had helicopter parents, his dad went to Stanford, from the Bay area, grew in Hillsdale, stayed in bav area
Is essential to be patient with, empathize with and listen to others. He seeks to understands
Trying for a kid/ could be pregnant
Drinks a lot of water
Can't settle for a low-paying job with his changing priorities (having a kid)
Says that he is very in-tune with his body's stress signals
Daily routine, Sleep until 7-8, eat breakfast, gym, job search, 4:30-5 make dinner, talk with wife, sleep by 9
Left corporate job because of lack of positive reciprocation, location, and affected his work-life balance
Watches his portions, he is 6'9", he tends to overeat
Relies on his wife and family
Does not like working in the food industry because of the free food
Worked various jobs: Corporate Sales, Starbucks, Customer Service
In-laws and parents are similar but argue
Think
Healthy body = Healthy mind
Thinks that current companies and employers expects more than what the majority of people have
Stress can be felt physically (literally says he feels tense in his chest muscles)
Thinks it is key to have open mind and patient
Thinks it is difficult to have a good work-life balance, but emphasizes its importance
Thinks that he might be behind at age but also thinks that is okay and that he has to be patient
Stress can be alleviated with more oxygen and water
Thinks his parents should relax at their age
Thinks that despite the growing hustle culture that people are able to care about their personal lives more
Thinks stress can be explained scientifically and that there are proven ways to manage your stress
Think anybody can something to deal with their stress
Thinks that a good way of combating stress is by talking with others
Do
Feels happy with his married life
Feels nice being supported by family
Feels regret not having enough fun in college
Feels that connections ar priceless
Feels sadness that he did not connect more with people in college
Feels confident that he is in a better place mentally and physically after leaving his corporate sales job
Values respect, humility, understanding others
Feels good when he does things according to his own principles
Feels grounded in his routine and his values
Feels concerne about his healt and weight
Feels anxious later in the day after his high of dopamine from working out
Feel
Sits upright
Tries to fit under the table
Put his hands together when he gives advice
Turns to the wall and looks in the direction of his hand motions
Touches his arm and shoulder
Politely moves things to make room for us to interview
Looked eager and excited when we asked for the interview
Often puts his hand on his knees when he's thinking
Tends to repeat himself
Tends to explain his thoughts step-by-step
Tend to emphasize certain things

Danna:



Dr. Luce:

Dr. V:

Key Insights

Julie

- Time management can affect their stress levels. Time is one thing people cannot control.
- When people set routines, they expect and want themselves to follow them.
- Social interactions can be an outlet and inlet of stress. There seems to be a delicate balance.
- Values are important but there seems to be a limit to how many a person can maintain.

Emi

- She seems to experience two types of stress– acute and passive. Acute stress feels more immediate and identifiable, due to events that cause stress immediately; while passive stress is a negative lingering feeling from a build up of small stressful experiences
- Compared to summer, where she had more time for healthy habits, social time, and longer and more leisurely meals, Emi feels more rushed and stressed during the school year
- She is willing to accept being 85% productive in exchange for making time for her social needs

James

- Finds that taking care of physical health is a crucial step in maintaining mental health
- Relationships and good communication are invaluable
- Having concrete and/or quantifiable methods to dealing with stress allows you to better adapt to stressful situations

Danna

- Danna's ability to have an "it will get better" mindset and her focus on time-blocking tasks show how adopting a more optimistic mindset mitigates stress.
- Danna feels stuck in societal pressures stemming from high-achieving peers and traditional Hispanic parents, steering her away from trying out new skills or activities.
- Societal norms have the power to normalize unhealthy behaviors, such as overcommitment, leading to burnout.

Dr. V

- There can be a lot of anxiety surrounding a lack of control or uncertainty in a professional context
- Some people feel more fulfilled when they see the direct impact their work is making
- Having more time, and thus less stress, does not equate to getting more done

Dr. Luce

- A person is past their threshold for stress when they start to notice signs of physical decline

- Being in tune with your personal physical and mental wellbeing can help to reduce stress
- There is such a thing as healthy amounts of “good stress”. This “eustress” can serve as a motivator for some

IV. POVs & Experience Prototypes

POVs

Julie POV

We met…

Julie, a self-employed vegan cooking teacher and married mother of two who has ADD, loves yoga, and is very particular about her health.

We were surprised to notice…

While she attempts to follow idealistic lifestyle habits, she falls short of implementing them.

We wonder if it means…

She convinces herself she can handle more than she actually can, due to various individual-specific barriers.

It would be game-changing if…

We can understand the different aspects preventing people from reaching their full potential in their life pursuits.

Danna POV

We met...

Danna, a high-achieving high school senior with lots of expectations on her.

We were surprised to notice...

Despite her awareness and frustration with the self-destructive, competitive Bay Area culture, she fed into it by letting pride prevent her from quitting AP Chemistry, even though it "ruined her year" and caused intense struggle.

We wonder if it means...

Danna has an internal fear of going against the status quo.

It would be game changing if...

We can maintain a sense of fulfillment and value by going against the grain / doing something different.

Dr. V POV

We met...

Dr. V, an interventional radiologist from Sacramento who considers himself a high-strung workaholic who is dedicated and meticulous about his work.

We were surprised to notice...

Despite his willingness to work on a team, he struggles to trust others and rather not delegate his tasks as he is worried about the quality of work.

We wonder if it means...

His lack of trust in delegation stems from the need for direct impact.

It would be game-changing if...

We can provide reassurance when he feels his impact is indirect

HMWs

Julie HMW

1. HMW utilize an individual's context to derive insights that boost their productivity?
2. HMW lower the barrier of mental energy required for different tasks?
3. **HMW enable people to bring awareness to their existing lifestyle habits?**

Danna HMW

1. HMW foster a societal shift from being accomplishment-driven to valuing personal growth and well-being?
2. HMW reframe failure as an essential part of learning and success, rather than something to hide?

3. **HMW empower young individuals to explore future possibilities without feeling restricted by convention?**

Dr. V HMW

1. HMW encourage highly attentive individuals to trust others?
2. HMW reframe negative feelings associated with stress into constructive experiences?
3. **HMW mimic the feeling of direct impact, even when that may not be present?**

Top 3 HMWs

1. HMW empower young individuals to explore future possibilities without feeling restricted by convention?.
2. HMW empower young individuals to explore future possibilities without feeling restricted by convention?
3. HMW mimic the feeling of direct impact, even when that may not be present?

Solutions

Solution 1

An app where young individuals can swipe left or right on unconventional career exploration activities, partnered with local companies and organizations. Users are encouraged to perform tasks and reflect on their experiences, cultivating a culture of learning and discovery.

Solution 2

A stress journal that correlates stress levels to specific habits. It provides personalized suggestions and insights, helping you optimize and tailor your habits for better stress management. Tracking features allow users to assign stress values to different things they do.

Solution 3

An impact visualization tool that shows how a manager’s actions influence others and the broader system. It highlights the ripple effects of his contributions and identifies areas for improvement.

Experience Prototypes

Experience Prototype 1

Assumption: Users will follow through and perform tasks that might be outside their comfort zone.

Test: Participants are presented with three unconventional activities, each represented by an image and brief description, and sorted into “yes” or “no” piles. They then complete the selected tasks, with pre and post-surveys used to assess changes in their experiences and perspectives.

Participants completed all the tasks that they said yes to. Participants indicated an overall positive experience performing these tasks. Participants carried about these tasks immediately after saying yes to them. Participants initially felt uncertain about how to do these tasks. Some participants were turned down/faced restrictions in carrying out tasks. Participants indicated that “asking a stranger for career advice” seemed unrealistic. Even if individuals were hesitant at first, they were motivated to complete tasks. Participants felt a sense of accomplishment and pride after completing the task. Participants indicated that they feel a bit more open to trying or doing something new.

Experience Prototype 2

Assumption: People are willing to track their stress multiple times a day.

Test: Individuals fill out a bucket diagram to represent their stress levels throughout the day, every hour from 3 pm - 10 pm. If they miss a bucket, they are not allowed to fill it out. Once the individual has filled in all the buckets at 10 pm, they submit the diagram and are then asked a series of questions asking them to reflect on the exercise

Participants filled the majority of the buckets with differing levels of stress. Participants liked reflecting as the day went by. Participants liked understanding what times they were stressed during the day. It was easy to forget to fill in the diagram, especially in succession. People initially felt obligated to fill in the buckets. Further testing is necessary to see if people can keep logging for multiple days. Tracking your stress levels does make you aware of your stress. People enjoy logging their stresses down multiple times a day. We want to create a method that allows easy recording of stress without being too invasive or annoying.

Experience Prototype 3

Assumption: Seeing the scope of one's impact would reduce anxiety and make them feel more fulfilled.

Test: Have two players participate in a social experiment. One subject is given a list of tasks that she relays to her sub-manager. We ask the manager to leave the room while the sub-manager relays the tasks to the lowest employee. In the meantime, the manager answers preliminary questions regarding their thoughts about the task and the employee hierarchy. We then showed them an impact visualization tool specific to their situation, then asked follow-up questions to assess the effects it had on the manager's stress and work fulfillment.

Participants indicated during the post-visualization quiz that the impact map did make them feel more trusting of the employees under them

Participants liked having a tangible measure of their impact and work. One participant felt even more unsatisfied being able to see the exact magnitude, or how low the lowest employee's understanding of the task list was. The visualization tool was very bare bones and didn't allow for any of the participants to engage with it. Providing tools such as this one can promote trust in the workplace, thus reducing stress. Too much transparency could cause tension and stress within a team dynamic. Participants did feel more fulfilled and glad that they could see the impact they were making.

V. Design Evolution Process

Final Solution - Level Up

We chose to develop a mobile app that encourages the user to build their soft skills by breaking them down into daily, bite-sized experiences. We call this app Level Up as the user will gain experience points (XP) in the app as a way to track their overall progress and compare themselves with their friends or the rest of the world.

Description

A platform that allows users to build interpersonal skills critical to career growth by breaking skills down into bite-sized experiences, and providing tools to track progress and compete against others.

Target Audience

Students and Early Career Professionals

Who Might Be Left Out

Individuals unable to interact with others and try certain activities that require groups of people

Ethical Implications

Accessibility (users may face difficulties going out to participate in experiences, experiences are predetermined and reviewed only by our team, application can only be used on mobile devices, collecting and storing general information from users)

Solution Rationale

We chose to go with a mobile application. We want users to interact with Level Up in their daily lives to motivate them to build their human skills. We want users to seamlessly integrate Level Up into their daily routines, using hands-on experiences to build human skills without being distracted by the medium's complexity. The mobile app modality ensures easy access to all features—completing tasks, sharing with friends, and tracking progress—making skill-building more intuitive and engaging.

A full list of the pros and cons of the selection rationale of a mobile application is listed below:

Pros	Cons
Mobile dimensions highlight essential features without overloading users, making it visually accessible and clear.	The modality may feel overused or less engaging due to the overcrowded app market, risking our app getting lost in a sea of other apps.
Aligns with the heavy mobile usage of students and early career professionals, signaling higher accessibility and adoption.	Potential disconnect between accessing tasks and performing them which may lead to decreased engagement and task completion.
Supports notifications and reminders, which increases user engagement and encourages task completion in real time.	Users with older devices or limited storage may experience performance issues, reducing accessibility and adoption.
Provides flexibility for users to access	Smaller screen sizes can limit the

tasks and content on the go, catering to busy lifestyles.	content and features that could be presented in a desktop or web app.

Tasks

Simple Task

Access an experience and unlock a new one

The simple task we implemented was accessing an experience and unlocking a new one. This is the central nature of our app–finding an interpersonal skill to build and complete a bite-sized experience associated with it. This task requires the user to either choose a skill category (problem-solving, communication, leadership, or adaptability) or select the daily experience we provide, read the experience description screen, do the experience, write a reflection, and mark it as complete. Once they complete an experience, they can go back to the experience list and see that they unlocked a new task.

Moderate Task

Track personal progress over time

Our medium task is to have the users see how they can track their personal progress over time. Once users start completing tasks and using the app more frequently, they will naturally want to see how they are improving over time or in certain skill areas. Reflection is important for our user base and progress tracking allows users to quantify their improvement and see which areas they want to develop further. This task requires the users to go to their profile, access their progress report, see how many xp points they have gained, and display different measurements of their progress.

Complex Task

Compete with friends and send them challenges

Finally, our complex task is to have users compete with their friends by sending them challenges. A vital component of building these interpersonal skills is to build a social environment where you can improve them. Skills such as communication and leadership grow stronger when you can physically interact with others. As such, involving friends and acquaintances in this journey will only serve to strengthen

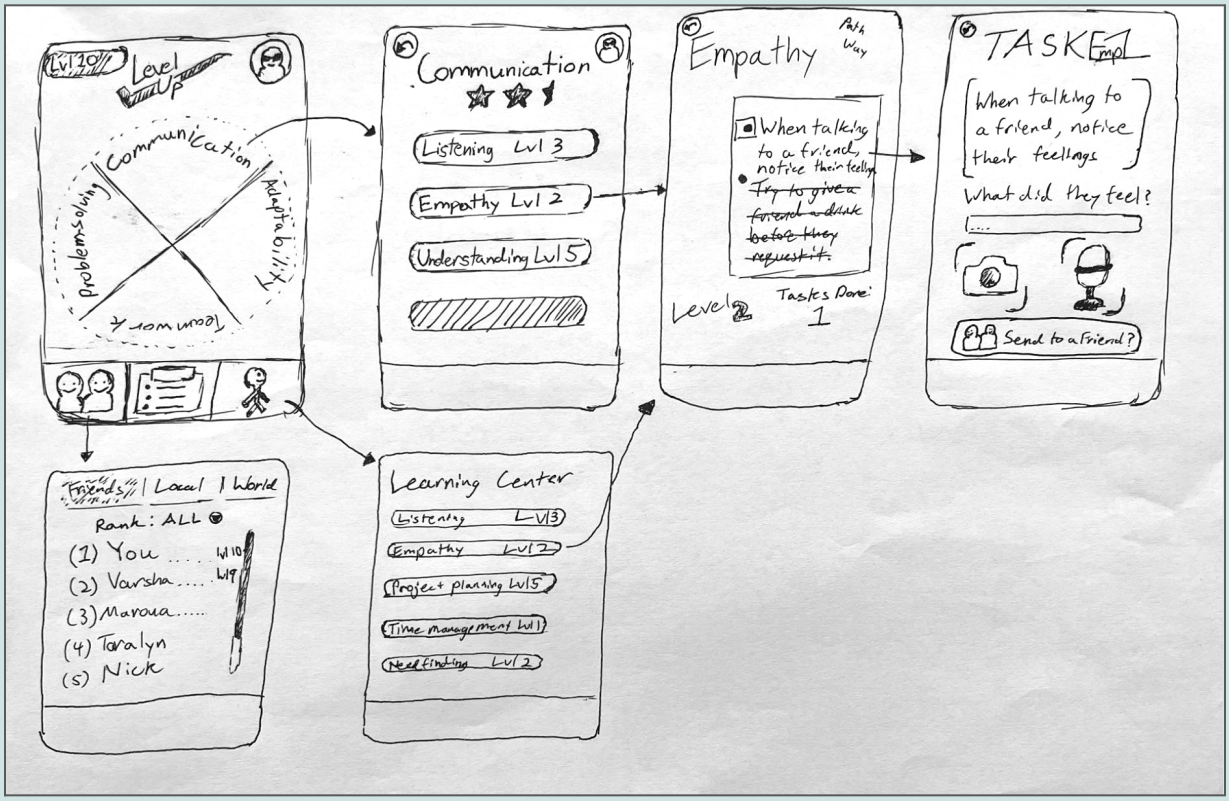
these skills. By sending challenges and competing with friends, you can learn and observe how your friends handle certain situations and gain insight into different behaviors and new solutions. Interpersonal experiences are not similar to hard technical skills in this regard as there is not one single right answer for every social situation. We want to push our users to understand this nuance and open their minds to different possibilities. This task has two methods. 1) Users go to their completed experiences' description screen and select a friend to send that specific task to. 2) Users go to the leaderboard, select a friend to challenge, and pick multiple tasks to send to that friend. They then have to access their challenge log to see their sent and received challenges for additional confirmation.

Design Iterations

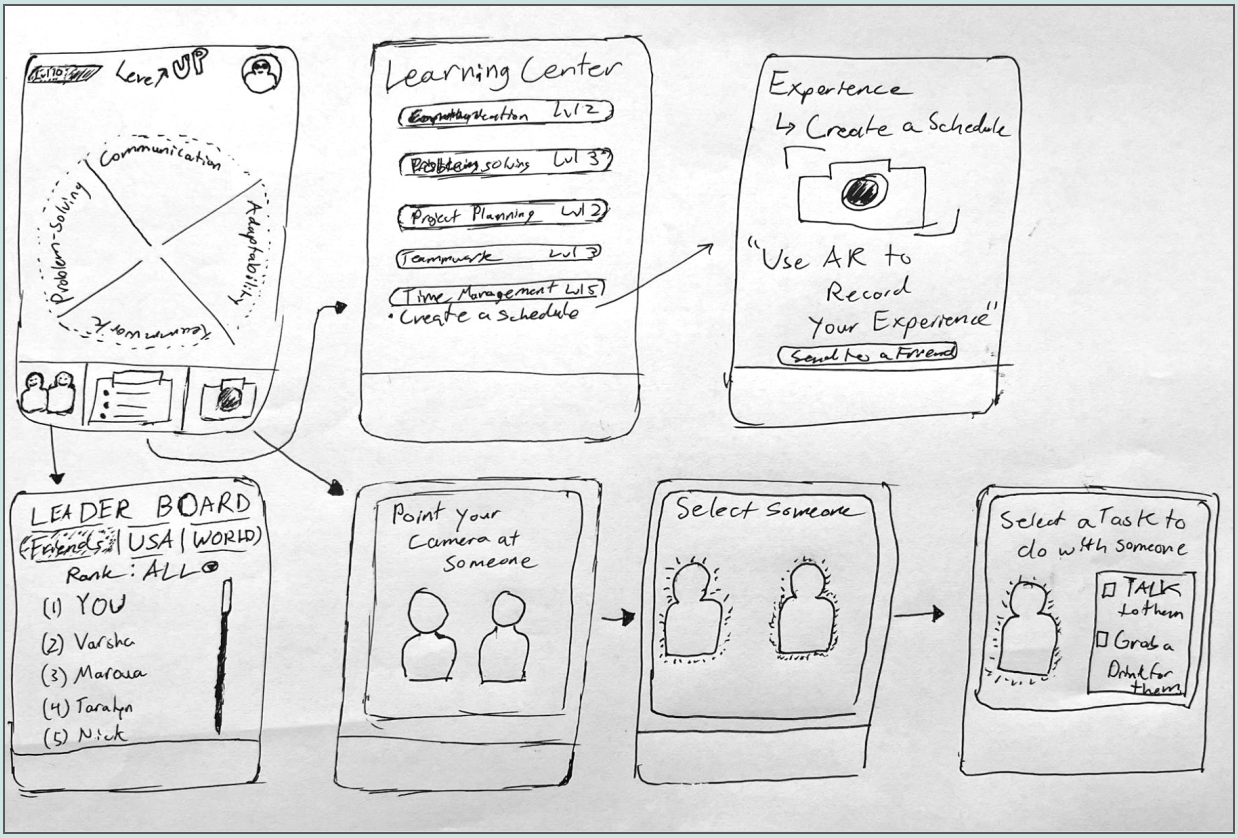
Low-Fidelity Prototype/Initial Sketches

During the initial sketches stage, we brainstormed various design directions, including mobile applications, web applications, wearables, augmented reality, and virtual reality. The two realizations that excited us the most were the mobile application and augmented reality:

Mobile Application



Augmented Reality

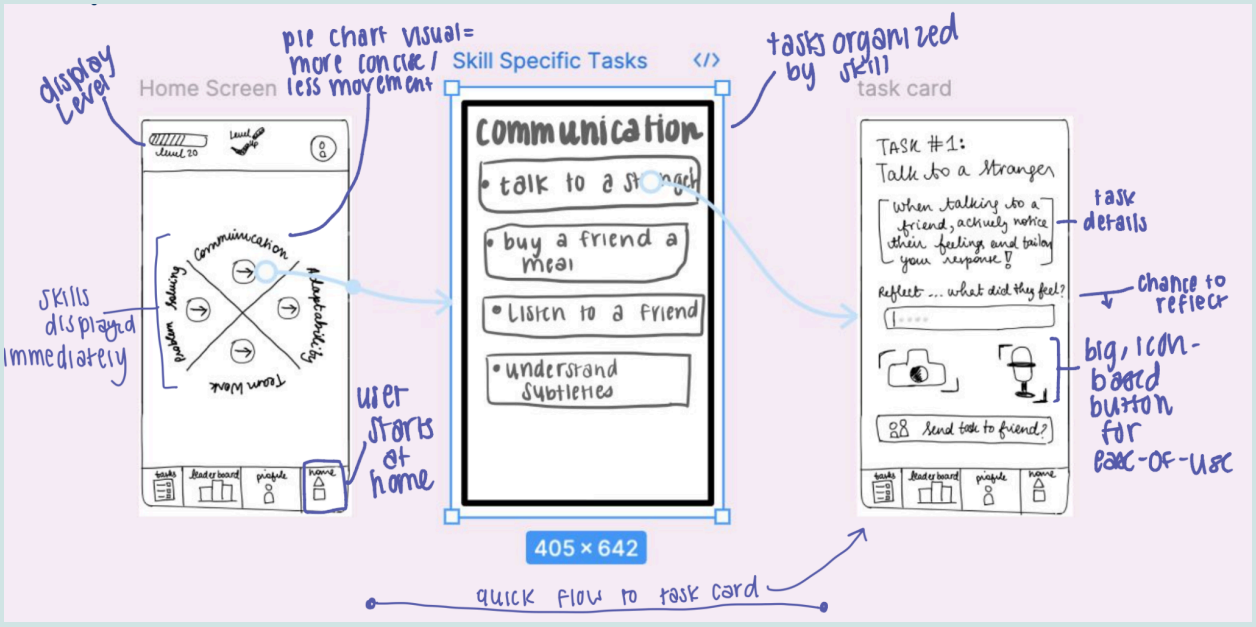


AR enhances accessibility by enabling users to interact with scenarios they might not otherwise encounter. Its visual engagement bridges the gap between interaction and task completion, creating an immersive and engaging experience. Real-time feedback fosters active participation, aligning with our "learning through experience" approach while adding a "cool" factor that appeals to users. However, AR has drawbacks, such as requiring users to constantly point their devices, which can feel inconvenient or unnatural. Additionally, its unfamiliarity and initial learning curve may deter some users or lead to misunderstandings.

We ultimately chose the mobile app modality to integrate Level Up seamlessly into users' daily lives, encouraging the development of human skills through hands-on experiences. A mobile app offers straightforward access to key features—completing tasks, sharing progress with friends, and tracking achievements—while minimizing distractions from complex interfaces. This approach ensures skill-building remains intuitive, engaging, and part of users' everyday routines.

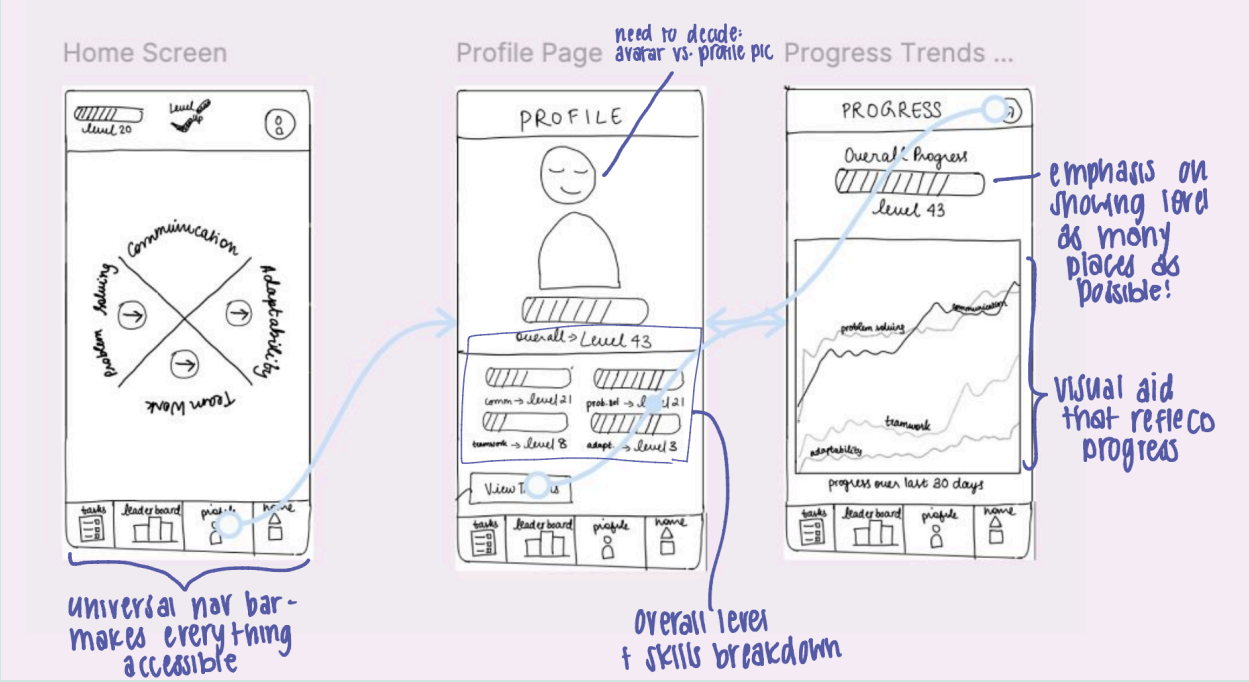
We then used Notability to sketch our task flows and create our low-fidelity prototype.

1. **Access an experience**



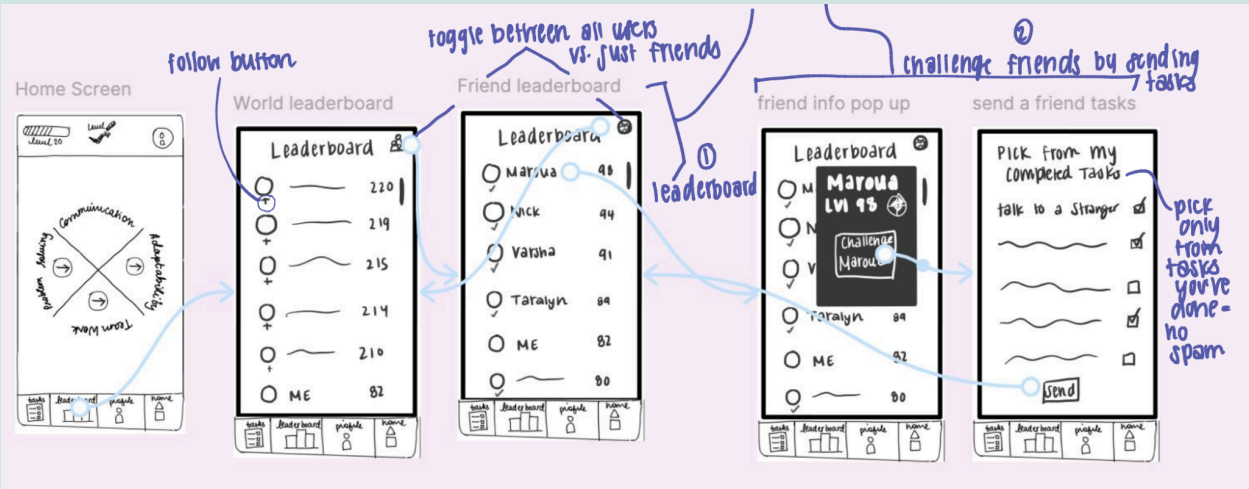
Click on Skill Category->Select an Experience->See Description Screen, Complete Experience, and Write Reflection

2. **Track personal progress over time**



Select Profile->Select View Trends->See Progress Graph Over TIme per Category

3. **Compete with friends and send them challenges**



Go to Leaderboard->Click on Friends Leaderboard Icon (in Top Right)->Select Friend->Select Tasks to Send

Usability Testing

Environment and Procedure

To get feedback on our low-fidelity prototype, we drove to University Ave in Palo Alto and set up our prototype in Pizza My Heart, T4, and Salt n' Straw. We recruited our participants by walking up to them and asking for 5-10 minutes of their time. We got five participants: Ashley, Taryn, Sarah, Yumna, and Paarth. We explained the app concept, who we were, and we did not compensate them.

Usability Goals & Key Measurements

Our first usability testing goal was the **Efficiency** of the app. We wanted to further design our app and lower the barrier and efforts needed to complete tasks and build skills. We believe navigating our app should be easy and efficient. We measured this goal through the time it takes the user to get through a full task flow (Simple, Moderate, Complex). Our second usability goal was the **Enjoyment** of the app. The novelty of our tasks and the concept as a whole is that it is "bite-sized", easy, and fun. We believe that if users enjoy the time spent on the app, they will be motivated to do more tasks and use the app more. We measured this goal by getting Post-test

ratings from users on a scale from 1-10 based on 1) the overall flow of the app,, 2) the Interface and aesthetics, and 3) the overall enjoyment of this experience and the app's concept.

Results and Implications

Usability Goal: Efficiency

- Average Time For Each Task
    - Simple: 88.8 seconds
    - Moderate: 45.2 seconds
    - Complex: 25.8 seconds

Usability Goal: Enjoyment

- Average Post-Test Ratings
    - Flow: 7.8/10
    - UI & Aesthetics: 7.6/10
    - Overall Enjoyment: 7.0/10

Key Interview Quotes:

- "I am pretty tech-savvy so I think older people would struggle to use this properly."
- "Woah that's surprisingly a lot of words"
- "I want to get a sense of the navigation bar first and foremost"

- “I’m not really sure what I would type in the reflection bar, or if I would use the camera and mic”
- “Looking at this task list is very overwhelming… it makes me want to close the app” *proceeds to leave this screen*
- “I like how I’m level 43… it feels rewarding!”
- “I enjoy the descriptions and subtleties task on the list”

Overall, we were happy with the results of both usability goals, but we discovered a few key findings that influenced design changes moving forward.

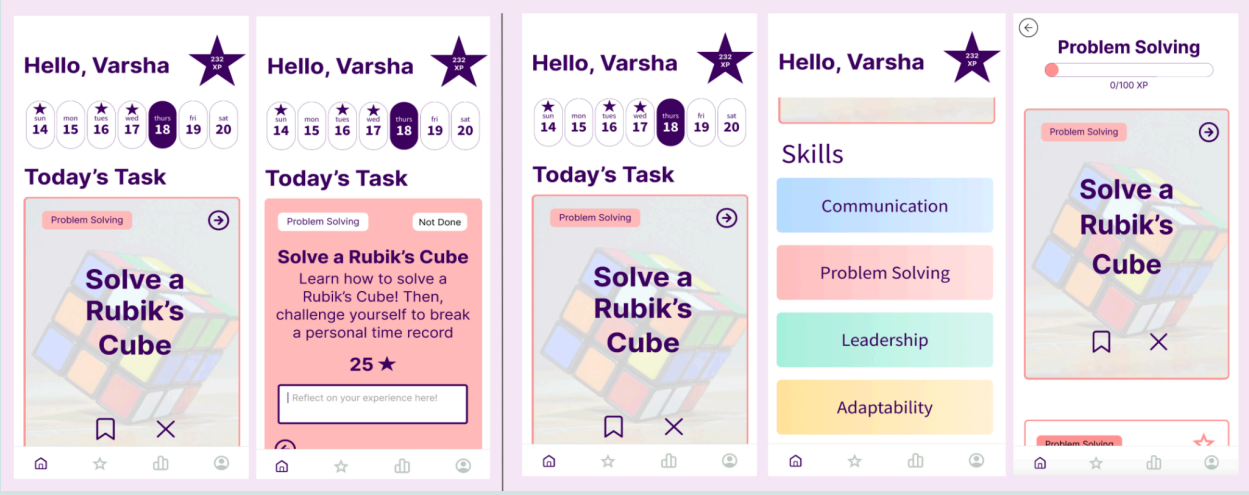
1. Home Screen was confusing and did not have a clear purpose. Most users did not click the main buttons to go to the tasks screen. As such, we believe the Home Screen needs to catch the user’s attention/be intuitive. We will make the Home Screen intuitively interactive and fun. We will emphasize the buttons on the home screen and make them feel satisfying to click.
2. Task List was overwhelming at first sight. Some users said that they would get stressed and shut down the app. It feels like a chore. As such, we believe the task list is not encouraging users to build human skills and that tasks were not pleasantly presented, as there were too many at once. We will clean the task list and incorporate a daily challenge into the task list. We will also give the user the freedom to explore the app and choose tasks while guiding them in the right direction by presenting one “challenge.”

3. The Leaderboard and Friends List need to be clearly laid out and visible. We will focus the users to send tasks to their friends through their friend lists. We discovered that sending a task to a friend from the leaderboard was not touched and that every participant sent a task to a friend through the option on the task description screen. Sending a task from the leaderboard is unintuitive and completely disconnected

Moving forward into developing our Medium Fidelity Prototype, we will tackle the three design changes above and we will look for disconnects in features and functions that should be easily accessible.

Medium Fidelity Prototype - First Draft

1. **Access an experience**

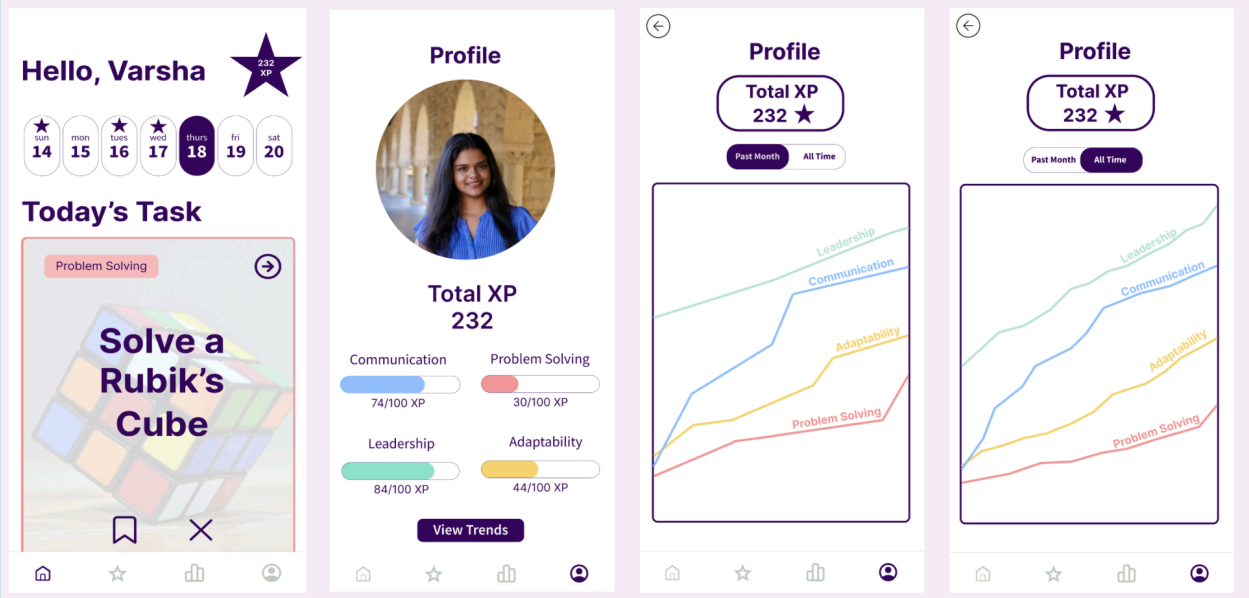


2 methods:

1. Click on Today's task card to flip it->See task description for new experience

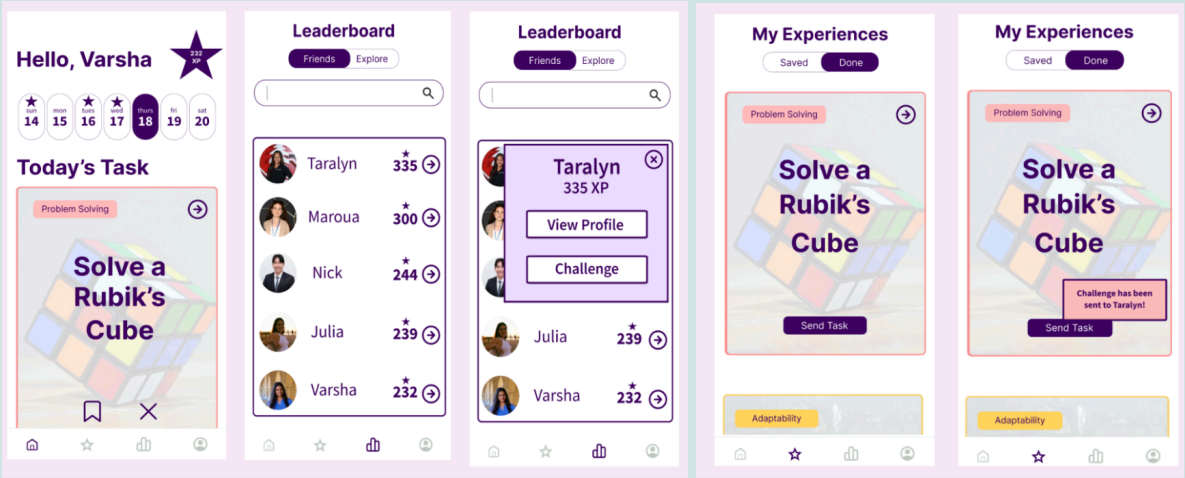
2. Scroll down to skills categories on home screen->Click on category->Click on task card to reveal description

2. Track personal progress over time



Click on Profile Icon on Dashboard->Click on View Trends->See progress over Past Month and All-Time

3. Compete with friends and send them challenges



Click on Leaderboard Icon->Click on Friend->Click on Challenge from Pop-Up->Select Task to send to that Friend->Confirmation

Expert Review: Results and Implications:

We brought this medium fidelity prototype to our CS147 section where we received critical feedback from an industry expert, our TA, and our classmates. We made these revisions for our Medium Fidelity Prototype.

1. General Changes:
    a. The word Tasks sounds lethargic and exhausting, similar to an errand
        i. Changed “Tasks” to “Experiences”
    b. UI Design and App Layout is too unintuitive
        i. Many game/task-centered apps have a specific format that is known to work and gets their users engaged, so we took inspiration and changed from task cards.
    c. The combination of levels and XP points is rather confusing
        i. We chose to only use XP points to represent people’s progress
    d. Level Progress Bar has no sense of completeness
        i. We took out the level progression bar and represented it with a numerical value in the XP points
    e. No Ability to Search for Tasks

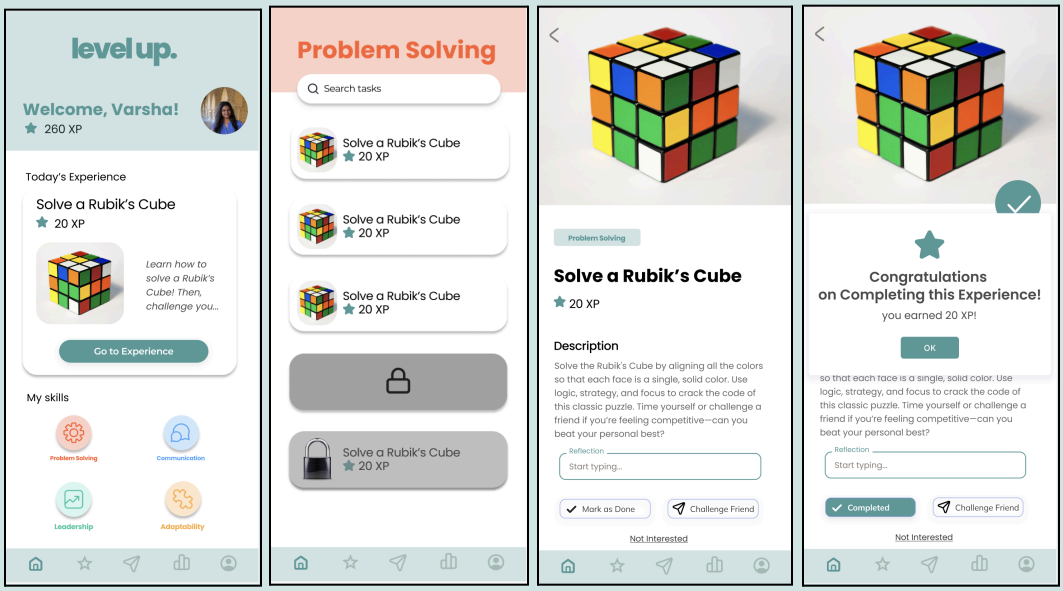
i. Added Search Bar for Tasks

2. Major UI Changes
    a. Everything should fit on the home screen
        i. Task Card is too big and overwhelming
            1. Made Task card smaller
        ii. Skill Categories on Home Screen are essentially invisible since people have to scroll to them
            1. Made icons smaller and more accessible
    b. The leaderboard should be clear in its intentions
        i. Made the leaderboard a way to compare your stats with friends and others by adding the XP points under everyone's names
        ii. Ranked the Leaderboard
    c. The color scheme of the app is too vibrant and overwhelming
        i. Changed the color to an analogous scheme and reduced unnecessary color usage

Medium Fidelity Prototype - Final

Based on our Expert Review and our Heuristic Evaluation results (described in detail below), we made many changes to our app from our first Med-Fi prototype draft. We continued to address more of the violations as we developed our Hi-Fi Prototype.

1. **Access an experience**



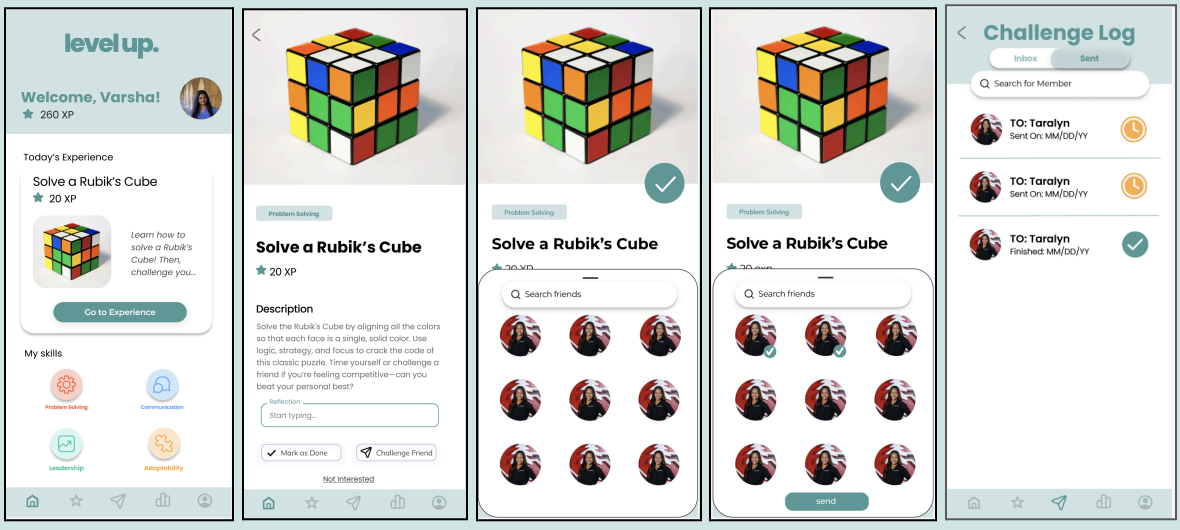
Click on Today's Experience or Click on My Skills->Click on Experience Card->Do Experience and Reflect->Click Mark as Done

2. **Track personal progress over time**

Click on Profile (Dashboard or Icon)->Click on My Progress->Click on Filters to Show Different Skill Progress Charts

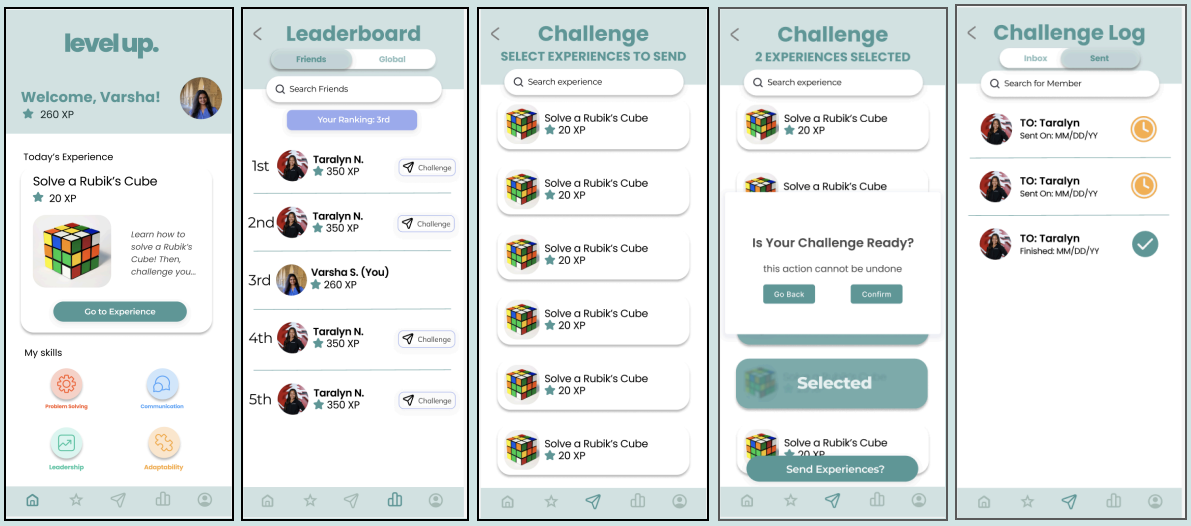
3. Compete with friends and send them challenges

Method 1:



Click on Experience->Click on Challenge Friend->Pop-up appears->Click on Friends to Send->Check Challenge Log (Send Icon)

Method 2:



Click on Leaderboard->Click on Challenge (near Friends' name)->Select a Challenge->Click Send Experiences->Confirmation->Check Challenge Log

Heuristic Evaluations

We sent the first draft of the medium fidelity prototype to a group of students in CS 147 studio for a heuristic evaluation: They found 101 Total Heuristic Violations, including 32 High Severity Violations [3-4] and 69 Low Severity Violations [1-2]. We addressed 29 High Severity violations and 55 Low Severity violations.

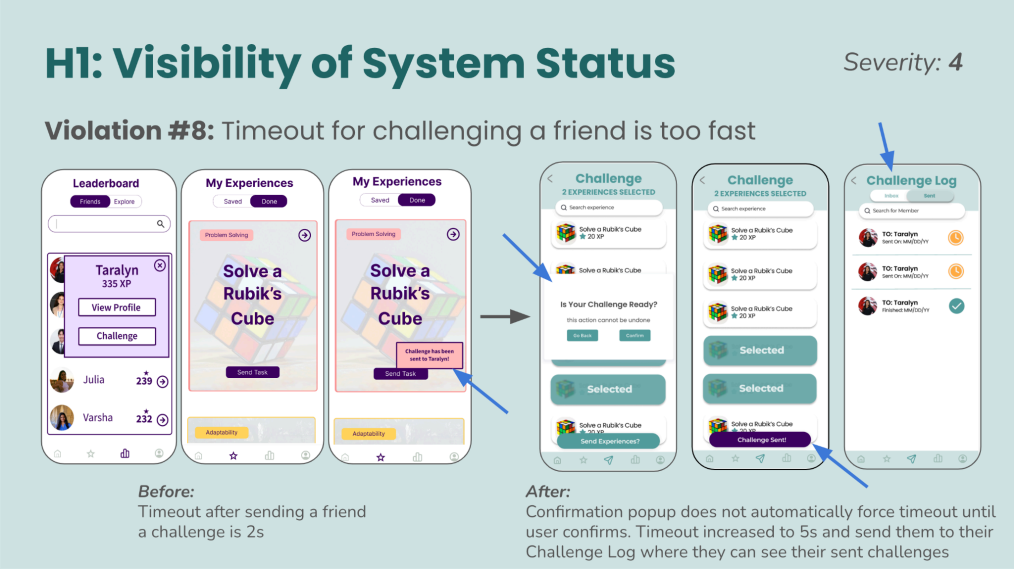
Most Violated Heuristics:

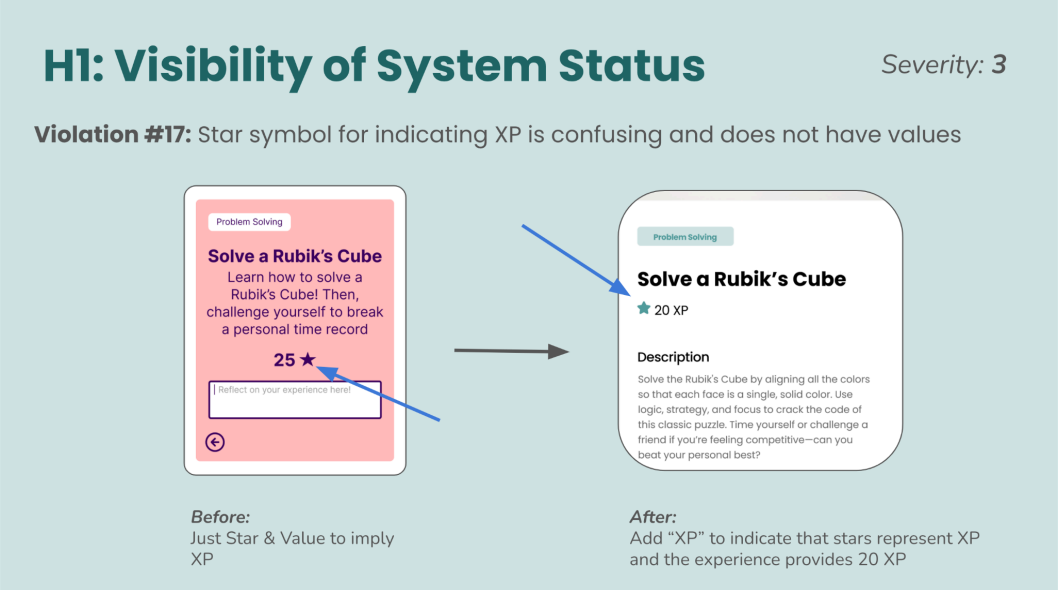
1. H8: Aesthetic & Minimalist Design (22)
2. H4: Consistency & Standards (20)

3. H1: Visibility of System Status (13)

Major Design Changes - Addressing High Severity Violations

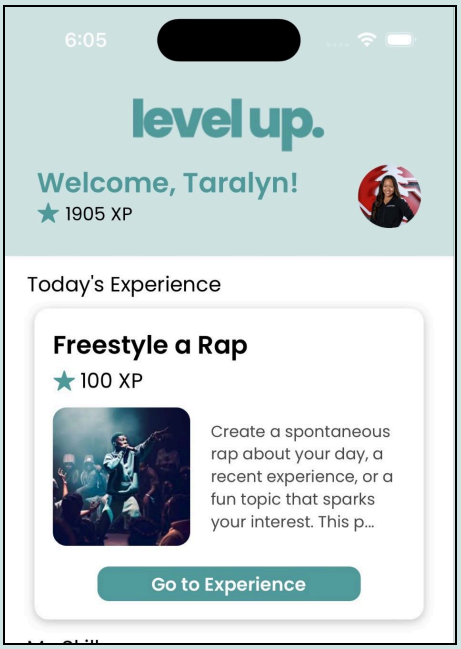
H1 Visibility of System Status





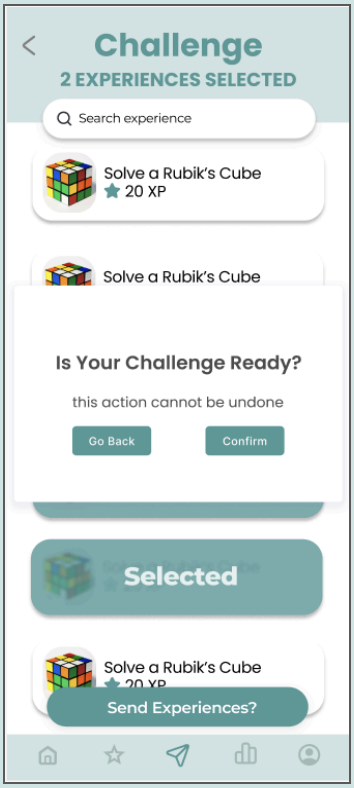
- Violation #54: XP on Home Screen and on Profile were inconsistent - XP Inconsistencies Fixed

- Violation #86: Star symbol has confusing meaning - Placed XP next to Star Symbol to signify it means XP

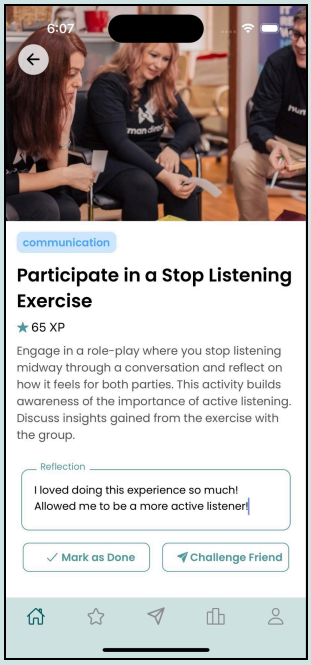


H3 User Control & Freedom

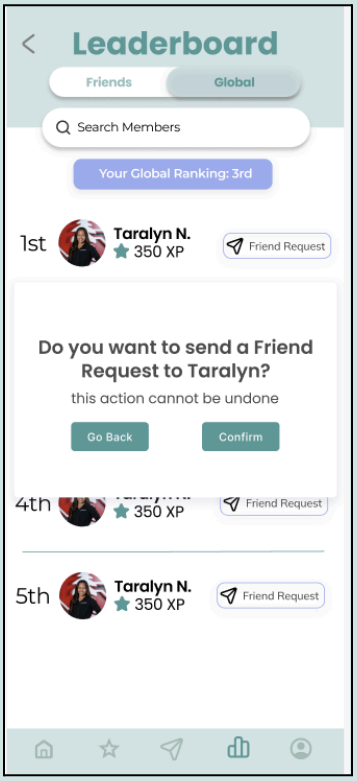
- Violation #22: No Confirmation Before Sending Challenge to Friend – There is now confirmation before sending challenge to a friend



- Violation #4: X in Experience Card is not functional and confusing – Removed X and option to say “Not Interested”
- Violation #78: “Not Interested” is unintuitive – Removed “Not Interested” option
- Violation #20: Button functionality on Friends in Leaderboard is unnecessary if you can click everywhere – Removed button
- Violation #60: Back button is missing after user presses challenge button – Added Back buttons



- Violation #21: No Confirmation before sending a Friend Request – There is now a confirmation message before sending a friend request

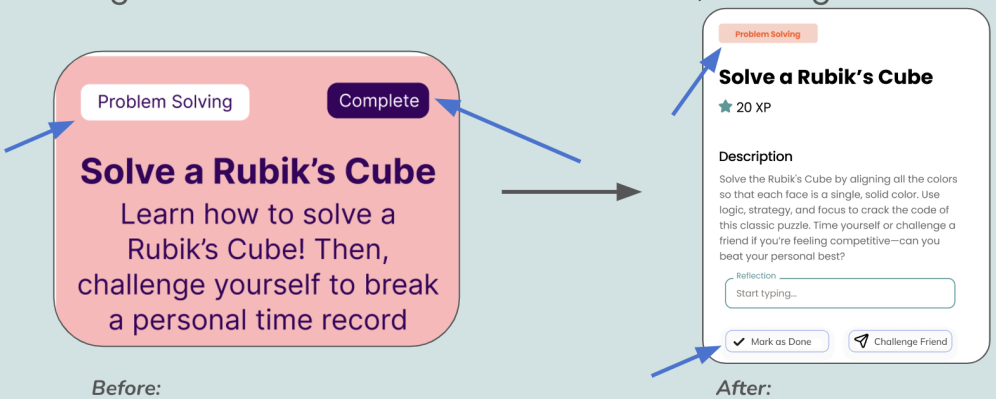


H4 Consistency & Standards

H4: Consistency & Standards

*Severity: **3***

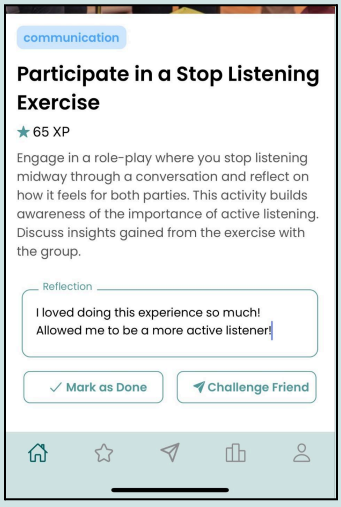
Violation #79: There are tags that look like buttons: The "Problem Solving" on the task box has a box around it, making it look like a button



Before:
Problem Solving Tag looks the exact same as the Mark as Done/Complete Button

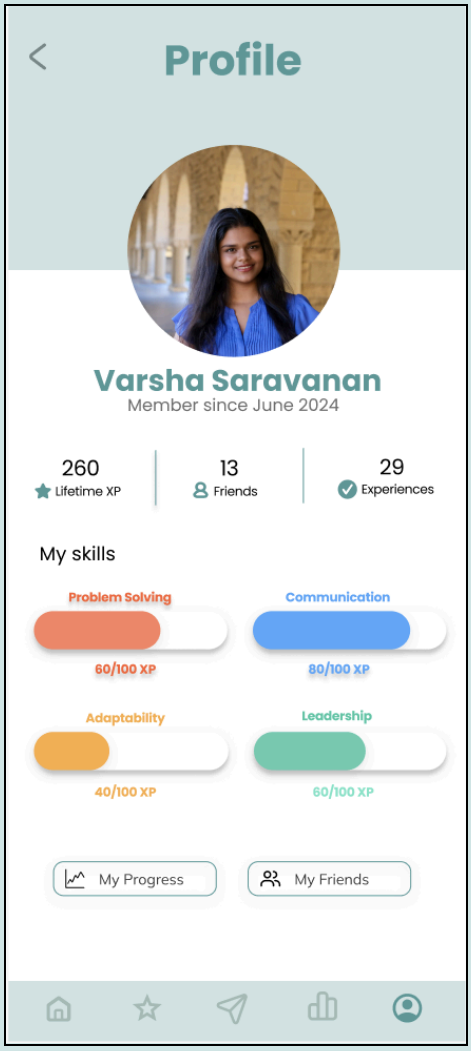
After:
Problem Solving Tag is different color and size compared to Mark as Done/Challenge Friend Buttons

- Violation #35: Bookmark button brings you to home page – Removed saving tasks as all tasks are in a more accessible list
- Violation #75: Bookmark/Saving Tasks Button is broken – Removed feature
- Violation #76: Saved tasks and xp both have stars – Star only mean xp now



H6 Recognition not Recall

- Violation #56: Progress Charts have no labeled axes – Fixed to have labeled Axes
- Violation #80: Name is not on Profile - Names are on Profile now

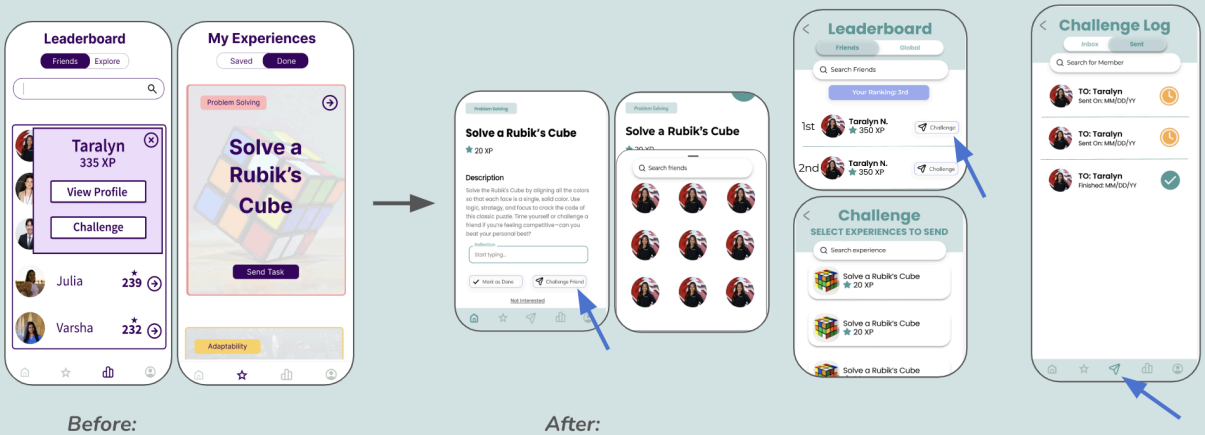


H7 Flexibility & Efficiency of Use

H7: Flexibility & Efficiency of Use

*Severity: **3***

Violation #24: Challenge a friend task flow is very unclear and is unintuitive



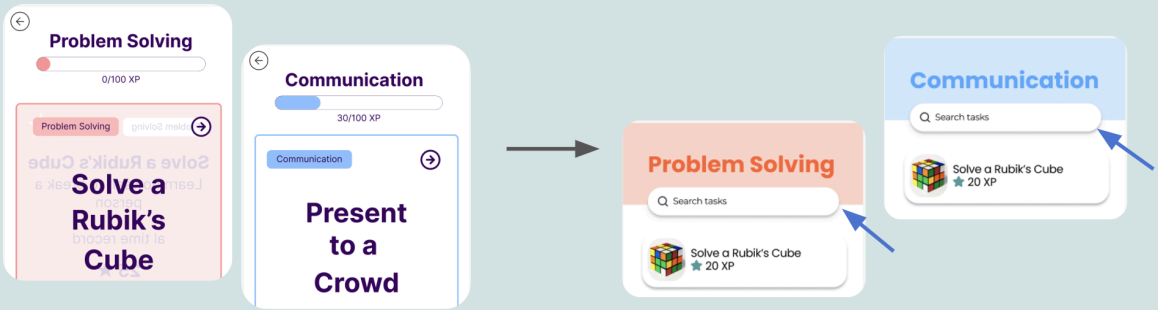
Before:
Challenge Task Flow can only be accessed through Leaderboard and directs to a secondary My Experiences Screen

After:
Challenges can be accessed in 3 ways: There are two ways to send challenges – through an experience card screen or through the leaderboard – and the middle icon on the dashboard accesses the Challenge Log where sent and received challenges are displayed

H7: Flexibility & Efficiency of Use

*Severity: **3***

Violation #44: No Search bar inside each of the skill areas



Before:
Skill areas screens did not have search bar for experiences

After:
Search bar have been added to all skill or experience list screens

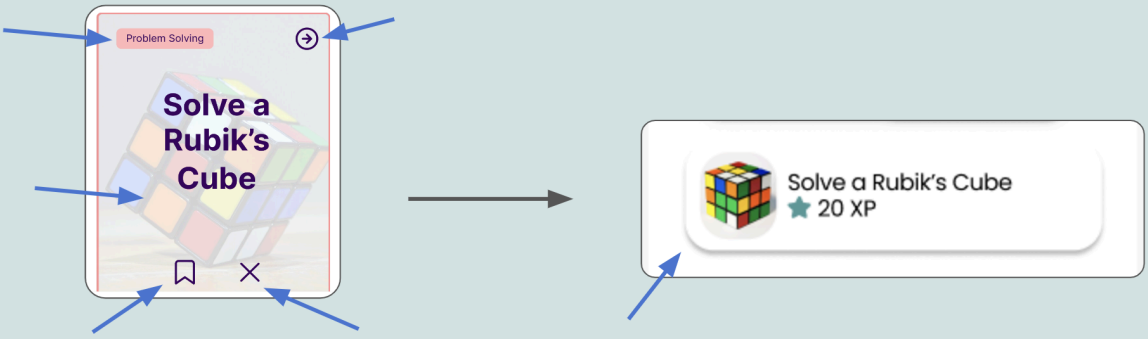
- Violation #81: Not Interested is annoying – Removed Not Interested function
- Violation #80: Saved Skills on Separate Page – Removed Saved Skills

H8 Aesthetics & Minimalist Design

H8: Aesthetics & Minimalist Design

*Severity: **4***

Violation #82: There are 5 things that look clickable on the task card



Before:
Task Card has multiple clickable buttons, makes it confusing for the user

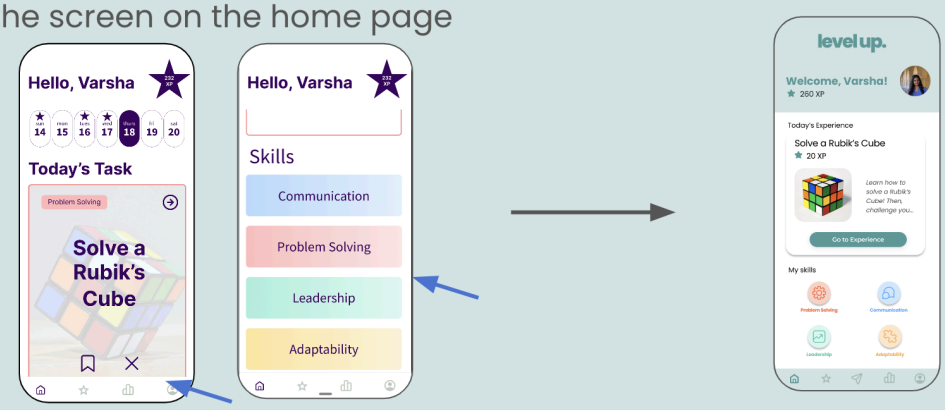
After:
Experience (Task) Card is a smaller interactable element that aims itself as a whole to be a button to click

H11 Accessible Design

H11: Accessible Design

*Severity: **3***

Violation #84: Scroll to access the buttons for today's task, it does not fit the screen on the home page



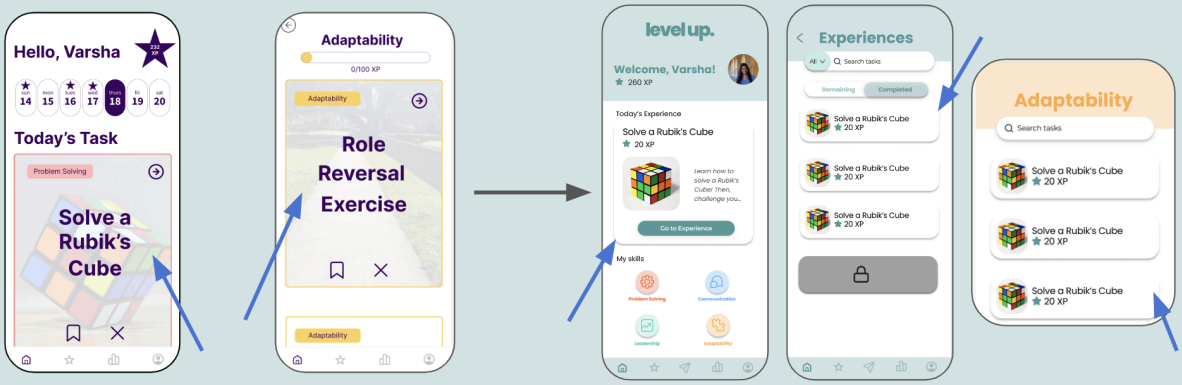
Before:
Today's Task Card is cut off in the home screen, skills buttons are hidden below it and scrolling is required to see them

After:
Today's Experience is made smaller to fit all elements and buttons on the screen. No need to scroll down to see skill buttons now

H11: Accessible Design

*Severity: **4***

Violation #83: Task Cards are too big and cover the screen, Text on Task cards takes up ¼ of the screen



Before:
Task Card is too big and covers the whole screen, can one see one task card at a time

After:
Experience (Task) Card is a smaller on both home screen, experiences screen, and specific skills screens

- Violation #57: Progress Chart Graphs have low contrast and hard to read – Made them more visible and higher contrast
- Violation #18: Next button on Friends is hard to click – Removed that button, made each friends row a clickable button except in the “Challenge” area
- Violation #28: Back and Next Buttons in Log in and Sign up are hard to Click - Moved them to be easily clickable

H12 Value Alignment & Inclusion

- Violation #100: Bias in Images Presented for Experience Cards - More balanced gender imagery

Violations We Did not Address:

Heuristic	Severity	Description	Justification
H12: Value Alignment & Inclusion	3	The user is not able to choose what skills they would like to improve.	We believe in the future, there is opportunity to add more "skill" categories. These categories encompass the core skills and all contain a wide range of experiences for the user to accomplish.
H6: Recognition, Not Recall	3	The task cards only have a vague title, and you need to flip it over to see the rest of the information.	By sizing down the experience card and transferring the description to a separate screen, we believe that short title that gives the general idea of the experience is what the user would like to see.
H3: User Control & Freedom	3	Button functionality on task card and leaderboard seems unnecessary – clicking anywhere on card/section leads to flip or navigation	We believe that accessing the details of an experience is central to our value proposition, users should be able to intuitively access it

A Table of the Violations Sorted by Severity per Heuristic can be found below:

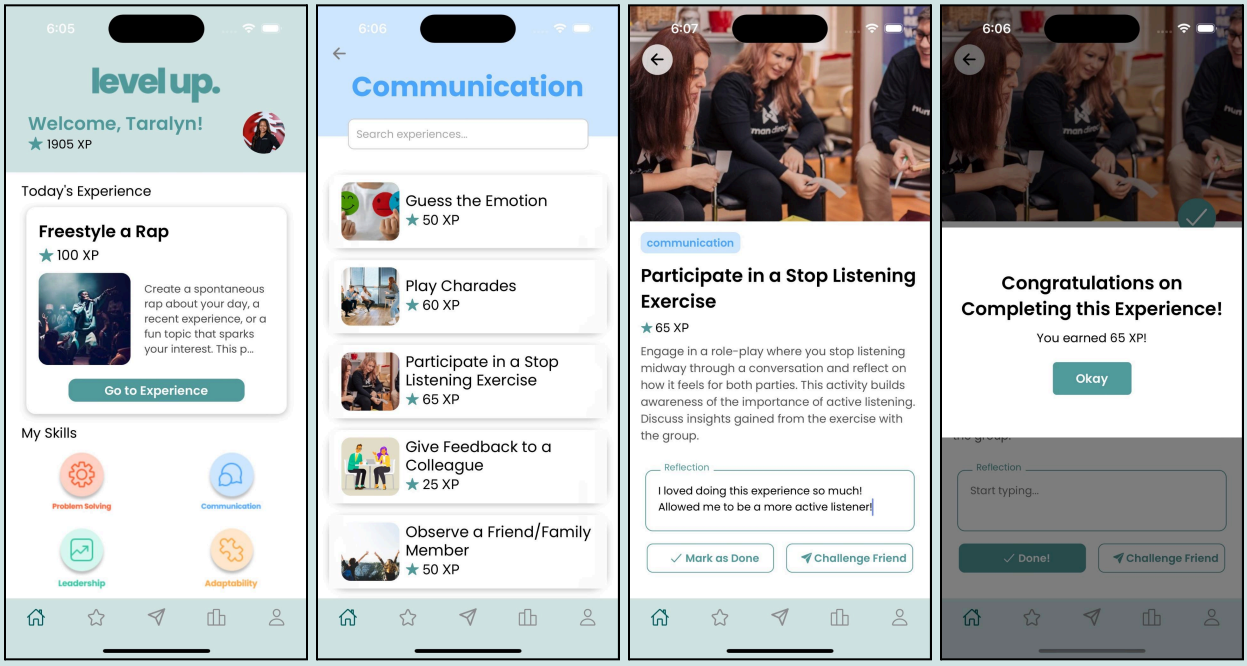
Heuristic	**# Viol. (sev 0)**	**# Viol. (sev 1)**	**# Viol. (sev 2)**	**# Viol. (sev 3)**	**# Viol. (sev 4)**	**# Viol. (total)**
H1: Visibility of System Status	3	4	2	2	2	13
H2: Match b/w System & World	0	5	2	0	0	7
H3: User Control &	0	0	1	6	1	8

Freedom						
H4: Consistency & Standards	0	6	9	4	1	20
H5: Error Prevention	0	0	2	0	0	2
H6: Recognition not Recall	0	0	4	2	1	7
H7: Flexibility & Efficiency of Use	0	1	2	3	1	7
H8: Aesthetic & Minimalist Design	0	12	8	0	2	22
H9: Help Users with Errors	0	0	1	0	0	1
H10: Help & Documentation	0	0	1	0	0	1
H11: Accessible Design	0	2	1	3	2	8

H12. Value Alignment & Inclusion	0	0	3	1	1	5
Total Violations	3	30	36	21	11	101

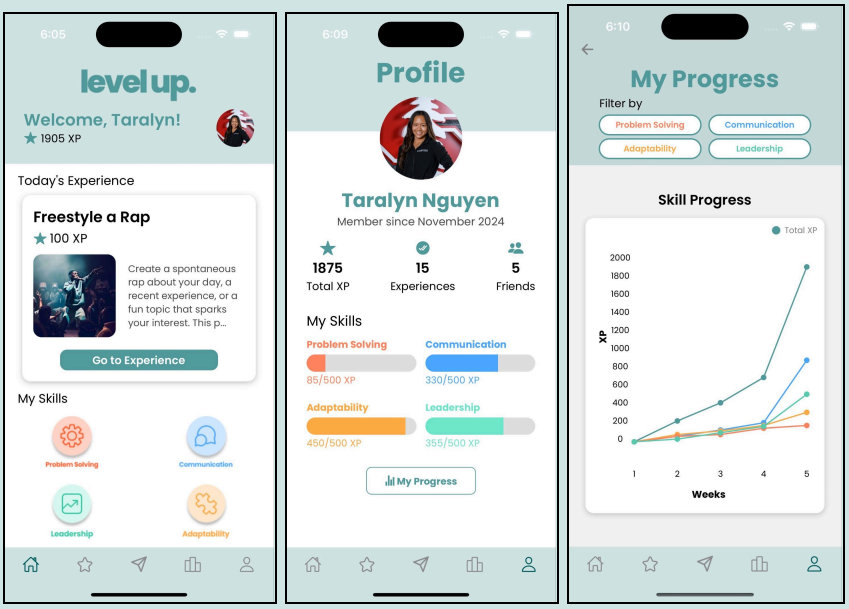
High Fidelity Prototype

1. Access an experience and unlock a new one



Click on Today's Experience or Click on My Skills->Click on Experience Card->Do Experience and Reflect->Click Mark as Done

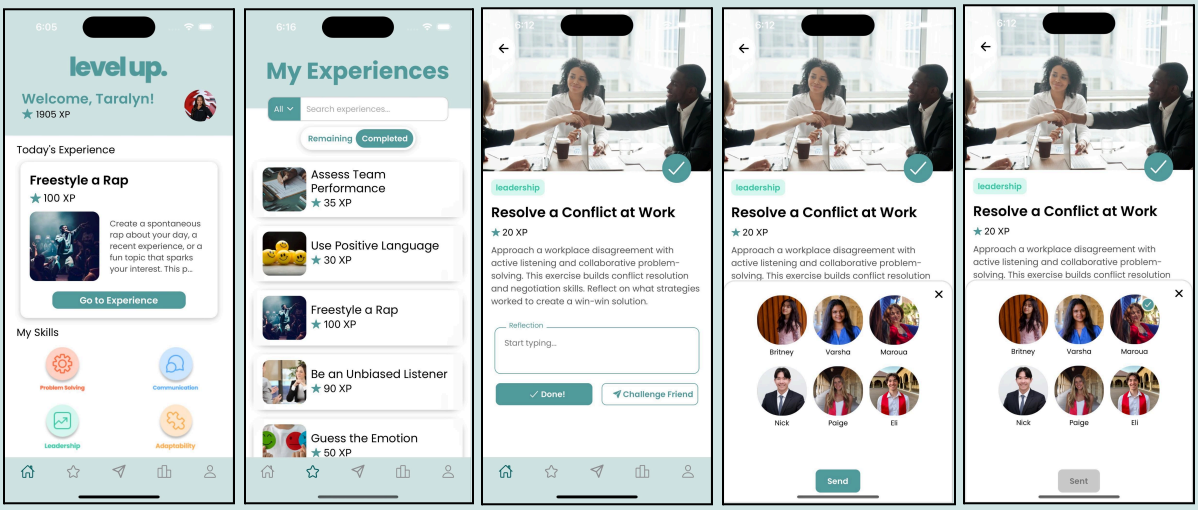
2. Track personal progress over time



Click on Experience->Click on Challenge Friend->Pop-up appears->Click on Friends to Send->Check Challenge Log (Send Icon)

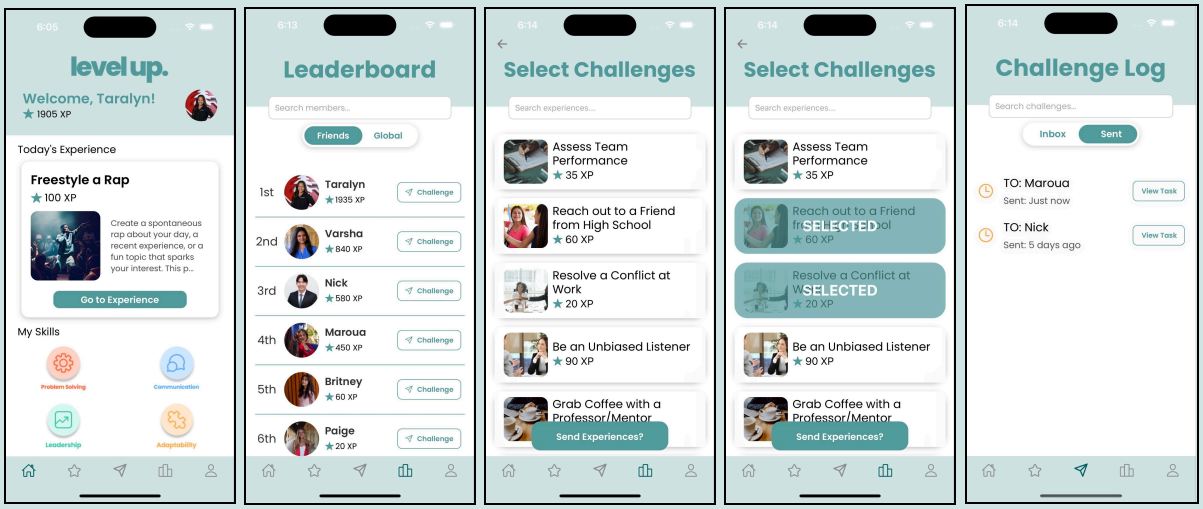
3. Compete with friends and send them challenges

Method 1:



Click on Experience->Click on Challenge Friend->Pop-up appears->Click on Friends to Send->Check Challenge Log (Send Icon)

Method 2:



Click on Leaderboard->Click on Challenge (near Friends' name)->Select a Challenge->Click Send Experiences->Confirmation->Check Challenge Log

Values in Design

Design Values:

Privacy:

We commit to getting user consent before using their data and sharing their progress with contacts

Accessibility:

We commit to making tasks diverse such that individuals of varying ability/disability can participate

Positivity:

We instill optimism and positivity regardless of users' progress, using encouragement as a motivator

Sustainability & Society:

We provide opportunities to build human skills useful to help individuals be better integrated and productive to the workforce

Vulnerability:

We encourage users to build human skills that naturally allow them to be comfortable with being uncomfortable

Competition:

We foster the ability for users to compete with one another and build healthy competition to allow for greater development

Value Contradictions/Tensions:

Vulnerability vs Privacy

Our goal is to cultivate a supportive environment such that users feel empowered to complete new tasks and document their journey, such that they can build skills organically and incrementally. As users may be hesitant to openly document their

progress if they feel exposed to potential judgment from other users, we prioritize keeping the visibility of reflections, progress trends over time, or category wise progress, private for only users to access.

Competition vs Positivity

We want to use friendly competition in a way to motivate users to continue to learn and master more skills, also serving as an accountability tactic. Level Up uses a leaderboard where users can view their friends'/ all users' levels and feel motivated to "Level Up." As we expand, we'd like to introduce and heighten moderation to ensure that the atmosphere of the competition/app as a whole is friendly and positive.

VI. Final Prototype Implementation

Tools Used

Figma

We used Figma extensively during the design and iteration phases of our app, particularly for refining our medium-fidelity prototype. It allowed us to overhaul our user interface (UI) and address key usability concerns identified during the heuristic evaluation and user testing phases. Here's how we leveraged Figma to create a more intuitive and engaging design:

1. Overhauling Task/Experience Cards

One major critique of our medium-fidelity prototype was the unintuitiveness of the task/experience cards. Users found the buttons hard to notice and confusing, leading to frustration when interacting with the cards. For example:

- The **"completed" confirmation button** was identical to the category headers, causing users to mistakenly click the headers, which flipped the card unexpectedly.
- Buttons like **"Save Task"** and **"Not Interested"** had low visibility and distorted the background image.

Using Figma, we redesigned the task cards to be more user-friendly and visually distinct. Inspired by gamified apps like Duolingo, Khan Academy, and PlayTours (a scavenger hunt app), we replaced the flippable cards with a curated task list. In the new design:

- Each task/experience tab is clickable and directs users to a dedicated description screen.
- Buttons are more visible and distinct, improving user recognition and reducing frustration.
- The description screen includes actions like marking the task as complete, reflecting on the experience, or challenging a friend.

2. Addressing User Control and Freedom

Another issue was the lack of undo functionality for the “Not Interested” button, which caused frustration among testers. Using Figma, we redesigned the task flow to introduce an **unlockable challenge sequence**, replacing the “Not Interested” button entirely. In this system:

- Users unlock new tasks only after completing the previous ones.
- While this reduces the number of initial options, users retain access to completed tasks, eliminating frustration caused by permanent choices.
- The iterative process in Figma allowed us to balance user control with an engaging progression system.

3. Streamlining Complex Task Flows

Our medium-fidelity prototype's complex task flow was unintuitive. Users struggled to send and track challenges due to:

- Limited visibility of the challenge buttons, which were accessible only through the leaderboard or the task cards.
- A lack of confirmation when sending a challenge, leading to confusion about task selection and completion.

Figma enabled us to revamp this flow by introducing a challenge log screen and simplifying access to challenge-related actions:

- **Challenge Log Screen:** Users can now see all sent and received challenges in one place, providing clarity and transparency.
- **Improved Access Points:**
    - From the task description screen, users can directly send a task to an individual.
    - On the leaderboard page, a visible challenge button next to each friend allows users to send multiple tasks.
    - Confirmation Feedback: Users now receive confirmation when selecting and sending tasks, improving confidence in the app's functionality.

4. Enhancing Visual Design and Accessibility

Figma also helped us refine the visual aesthetics and accessibility of our high-fidelity prototype:

- **UI Colors and Button Design:** We iterated on colors and button designs to ensure better visibility and alignment with accessibility standards.
- **Search Bar and Locked Experience Cards:** These elements were given a cleaner and more polished look to clearly communicate their purpose to users.

By leveraging Figma's design tools and collaborative features, we were able to address user feedback, enhance the app's usability, and create a captivating, user-friendly interface. This iterative process ensured that every aspect of the design contributed to a seamless and engaging user experience.

Adobe Photoshop

We used Adobe Photoshop to iterate through different design choices such as color, icons, and shapes. Items such as the experience cards were prototyped in Photoshop before being implemented into the Figma and the final app. Photoshop's ability to easily render and scale images made it useful in this design process. Playing around with the color of the app was made extremely feasible through Photoshop.

Additionally, for scaling the images on the experience cards and in the description screen, we used Photoshop to ensure the size was correct and the imagery was clear.

Moving forward, we used Photoshop to develop our poster and pitch slide as it is a powerful tool in editing–scaling certain screens to size, enlarging our icons, and displaying our logo, problem, and solution was simplified through Photoshop.

React Native

To code up the application, we used React Native as our development tool. React Native's cross-platform development capabilities and easy access to various libraries made it the perfect choice for creating a seamless and intuitive mobile development experience. Below, we explain how React Native facilitated the implementation of our app's core features, organized by task complexity.

Simple Task: Access an Experience and Unlock a New One

The foundation of our app lies in providing users with bite-sized experiences to build interpersonal skills. React Native enabled us to create an intuitive and visually appealing user interface for this task. Leveraging Stack Navigation, we structured an efficient flow where users can:

1. Choose a skill category (problem-solving, communication, leadership, or adaptability) or view a daily experience.
2. Navigate to the experience description screen.
3. Complete the experience and write a reflection.
4. Mark it as complete and earn XP

To implement functionality, we used React Native's state management tools to dynamically update the respective values, including making UI changes, incrementing XP totals, and unlocking a new task once a user completes an activity. This method ensures a smooth and engaging experience, maintaining users' motivation to continue learning.

Moderate Task: Track Personal Progress Over Time

Reflection and growth are key aspects from our value proposition, and React Native provided the tools to effectively implement personal progress tracking. By integrating libraries like Scalable Vector Graphics (SVG) charts for data visualization, we built visually compelling progress graphs and dynamic progress bars accessible from the user profile. Users can view metrics like:

- XP points gained.
- Progress in different skill areas.

- Personal growth over time.

React Native's cross-platform capabilities ensure that the progress bars and graph feature performs consistently across devices, offering a personalized experience to every user.

Complex Task: Compete with Friends and Send Challenges

The most complex feature of our app is enabling users to compete with friends and send challenges, fostering a collaborative, social learning environment. This required advanced implementation of backend services for real-time updates and React Native's robust ecosystem for creating a dynamic user interface.

We implemented multiple methods for users to engage with this task:

1. **Challenge a Friend from Completed Experiences:** React Native allowed us to design an interactive modal on a given experience's details page, where users can send the experience to friends.
2. **Leaderboard Challenges:** We built a responsive leaderboard where users can select a friend to challenge and then send them multiple tasks.
3. **Challenge Log:** We built an engaging challenge log tab for the user to track sent and received challenges, see who sent or received the challenge, and view the specific experience that was sent.

These features required careful integration of frontend and backend, with React Native facilitating seamless SQL fetches to our database. By utilizing React Native, we were able to achieve a balance between functionality and user experience across all levels of task complexity, creating an app that is engaging, efficient, and impactful.

Supabase

We used Supabase as our backend solution to manage the storage, retrieval, and modification of data and media for our app, including images of people and experience cards, experience descriptions, and their associated metadata. Supabase's efficient integration with React Native and its powerful features like storage, authentication, and real-time database management made it an ideal choice for our implementation.

1. Storing Images of People and Experience Cards

Supabase's built-in object storage was used to store and manage media files, such as:

- **User Profile Images:** For this implementation of the app, we uploaded profile picture images for each user, which we stored in a dedicated bucket.

- **Experience Card Images:** Images associated with different experiences were also stored in Supabase buckets. These images added a visual appeal to the app and helped users connect better with the tasks.

We used Supabase's SDK to upload images directly from the React Native app to the storage bucket. The URLs of these images were then saved in the Supabase database, making it easy to retrieve and display them dynamically in the app. We wrote React Native hooks to modify and fetch data, to and from the database.

2. Storing Experience Descriptions

Each experience was linked to the following columns:

- **An ID** (unique identifier for the experience).
- **Name** of the task
- **XP** value showing the amount of XP the user would earn if they completed that experience
- **Photo** uri link to the associated photo stored in supabase
- **Description** describing further details of the experience
- **Locked** boolean indiviating whether or not the task was unlocked for the user yet
- **Done** boolean indiciating whether or not the user completed the task yet
- **Category Tags** of the skill type, for easy filtering and search functionality.

3. Storing User Descriptions

Each user was linked to the following columns:

- **An ID** (unique identifier for the user).
- **Name** of the user
- **XP** values, tracking the amount of XP each user had for each skill and in total
- **Photo** uri link to the photo stored in supabase
- **Last skill**, an integer representing the last experience ID in that particular skill category that was unlocked for the user

4. Storing Graph Data

Each graph data point was linked to the following columns:

- **An ID** (unique identifier representing the week number).
- **XP** values for each skill and in total, tracking the amount of XP from the particular week

Supabase's relational database capabilities allowed us to structure this data efficiently, ensuring fast and secure retrieval within the app.

3. Using Supabase's ID System to Support React Native Development

Supabase's automatic ID generation for database entries was critical for organizing and linking different aspects of the app. We leveraged these unique IDs in the following ways:

- **Mapping Experience Cards to Users:** Each experience card and description in the database was assigned a unique ID. When a user completed an experience, we stored the associated ID in their user profile, enabling personalized progress tracking.
- **Efficient Data Queries:** Using IDs, we built efficient queries to fetch specific experiences, images, or progress data, reducing load times and improving the user experience.
- **Challenge and Leaderboard Features:** IDs were also used to manage challenges between friends. When a user sent a challenge, the system used IDs to track which tasks were sent and received, ensuring accurate updates in the challenge log.

4. Integration with React Native

Supabase's JavaScript SDK made it straightforward to integrate with React Native. We used its API for:

- Uploading and retrieving images from storage.

- Querying and updating experience descriptions and user progress data in the database.
- Managing user authentication and ensuring secure access to data.

5. Security and Scalability

Supabase's built-in role-based access control (RBAC) ensured that user data and images were securely stored. Only authenticated users could access or modify their data, and public resources like experience card images were set with read-only permissions for scalability and ease of use.

By combining Supabase’s robust backend capabilities with React Native’s frontend flexibility, we were able to create a seamless experience for users, providing dynamic and visually engaging content while maintaining secure and efficient data management.

Github

We used GitHub extensively throughout the implementation of our app, leveraging its features to ensure efficient collaboration, version control, and project management. Here's how GitHub helped streamline our development process:

1. Version Control

GitHub allowed us to maintain a centralized version history of our codebase. With multiple developers contributing to the project, version control was essential for tracking changes, preventing code conflicts, and ensuring that we could revert to earlier versions if necessary. Each team member worked on feature branches, which kept the main branch stable and free from incomplete or experimental changes.

2. Collaboration and Code Review

GitHub's pull request feature was instrumental in fostering collaboration. When a team member completed a feature or bug fix, they created a pull request for their branch to be merged into the main branch. This process allowed others to review the code, provide feedback, and ensure quality before integration. The review system also helped catch potential issues early, improving the reliability of our code.

3. Task Management

We used GitHub Issues and Projects to manage tasks and track progress. Each feature, bug fix, or improvement was documented as an issue, which made it easier to prioritize and assign tasks to team members. The project board helped us visualize the workflow, with columns for "To Do," "In Progress," and "Completed." This organization kept the team aligned on deliverables and ensured we met deadlines.

4. Documentation and Knowledge Sharing

The GitHub repository served as a centralized hub for project documentation. We used the README file and a dedicated "docs" folder to provide clear instructions on setting up the development environment, coding standards, and troubleshooting common issues. This ensured that every team member, including new contributors, could quickly onboard and contribute effectively.

5. Conflict Resolution

When conflicts arose due to simultaneous changes in the codebase, GitHub's merge tools helped us resolve them efficiently. By providing a detailed view of conflicting lines and the ability to resolve conflicts directly in the interface, GitHub minimized downtime and ensured smooth integration of code changes.

GitHub’s robust feature set made it an indispensable tool for our team, enabling us to collaborate effectively, manage the project efficiently, and deliver a high-quality app.

Expo

We used **Expo** as a core framework for developing and deploying our app, providing a powerful and flexible environment for building a seamless user experience. In particular, Expo's robust integration with navigation libraries allowed us to implement

intuitive and responsive navigation using **Stack Navigation** via the Expo Router. Here's how Expo supported our app's development:

1. Implementing Stack Navigation with Expo Router

The Expo Router allowed us to design and implement a stack-based navigation system, giving the app a clear and structured flow. Using this system, we organized screens for key features such as:

- **Task List:** Displaying all available experiences for the user.
- **Task Description Screen:** Providing details about a selected experience, including options to complete, reflect, or challenge a friend.
- **User Profile and Progress:** Showing personal growth metrics and achievements.
- **Leaderboard and Challenges:** Allowing users to view rankings, send challenges, and access the challenge log.

The **Expo Router** made it easy to define routes for each screen, with dynamic routing simplifying how tasks and challenges were passed between components. For example, when a user selected a task, its ID and metadata were passed to the description screen dynamically using route parameters, streamlining the app's functionality.

2. Optimizing Cross-Platform Navigation

Expo's compatibility with both iOS and Android ensured that the navigation system worked seamlessly across platforms. The router automatically handled platform-specific nuances like gestures, transitions, and back navigation, providing a consistent user experience.

3. Enhancing Navigation Performance

Expo's support for fast refresh and hot reloading enabled us to quickly test and iterate on our navigation system during development. This was particularly useful for fine-tuning the user flow and ensuring smooth transitions between screens, even as new features were added.

Wizard of Oz Techniques

- **"Today's Experience"** should recommend a task for the user based on their past activity using a tailored algorithm. However, it currently selects a task randomly from the user's remaining tasks without considering their activity history.
- Clicking **"View Task"** in the Challenge Log is intended to show the actual task sent to or received from another user. Instead, it navigates to a randomly

selected task each time, even from already completed tasks (marked with green check marks) or tasks sent to others.

- While other users are displayed to mimic a social network, **only one user**, Taralyn, is functional. As a result, challenges are not sent to real users, nor can users receive challenges through this prototype.

Hard-Coded Features & Limitations

Limitations

Although we have attempted to implement much of the proposed functionality, some parts of the design could not be implemented given the limited time frame. Please note the following:

- Our app's UI is compatible with the **iPhone 15** dimensions. Other dimensions may cause certain parts to be cut off
- Our app may require **occasional resets to the Supabase database** from our end due to its XP progression system. This involves resetting specific values in **Graph_data**, **Tasks**, and **Users tables**, ensuring proper functionality and progression consistency.

- We were unable to implement an onboarding flow where users can **“Sign Up”** or **“Log In”** thereby using/creating their accounts, as mapped out in our design.
- While the reflection box on the experience details pages allows for text inputs, the inputted information does not save in our backend database and therefore does not reflect when the page is refreshed.
- If a user receives a challenge of an experience they haven’t unlocked yet, they are still able to access it. This is because currently, the task flow has the experiences randomly assigned. Ideally, users should see a message such as 'You have not yet unlocked this experience’ when accessing locked experiences.
- After the user marks an experience as completed, we allow users to undo this in case it is necessary. While the XP counters throughout the app decrement when undone, the progress graph on the profile page is not set to reflect this.
- Additionally, several features are hardcoded or simulated for demonstration.

Hard Coded Items

- In the Challenge Log, the challenges under “Inbox” and “Sent” are hardcoded such that when a user sends a challenge, the log is not dynamically updated.
- The number of friends on the profile page is hardcoded.

VII. Reflection & Next Steps

Key Learnings

1. Every Decision Requires Keeping the User in Mind

Throughout the development process, we learned that every decision, from identifying the problem space to finalizing the design, must center on the user. Our key insights included:

- **Understanding the Problem Space:** Defining the core problem requires an in-depth understanding of the challenges users face. This involved extensive research and engagement with potential users to identify pain points and determine what they valued most in an app like ours.
- **Incorporating User Needs (Needfinding):** The solutions we proposed were directly informed by user needs. We used techniques such as interviews, empathy maps, and contextual inquiries to uncover hidden frustrations and desires, which helped us shape features like task descriptions, progress tracking, and challenge functionality.
- **User-Focused Design Decisions:** Decisions about usability, user experience, and user freedom were guided by how intuitive and satisfying the app would

feel. For instance, our move from flippable cards to a curated task list was directly influenced by feedback about frustration and confusion.

- **Aesthetics and Enjoyment:** We recognized that an app's visual appeal isn't just about design—it's about enhancing user enjoyment and making the experience engaging. Elements like gamification, analogous UI colors, and distinct buttons were added to make the app fun and approachable.

2. Utilize Robust Testing and Evaluation Techniques

The development process highlighted the importance of rigorous testing and iterative design:

- **User Feedback through Usability Testing:** Direct feedback from users during testing sessions exposed flaws we hadn't anticipated, such as confusion around navigation or the low visibility of critical buttons. These insights were invaluable in refining our design.
- **Design Iterations:** We embraced iterative design by repeatedly revising and testing the prototype. This allowed us to evolve from a confusing medium-fidelity prototype to a polished high-fidelity version.
- **Heuristic Violations and Their Impact:** Our medium-fidelity prototype initially had 101 heuristic violations. Addressing these violations required a complete overhaul of the design, from navigation to task flows. While challenging, this

process reinforced the value of evaluation techniques and thorough testing before implementing a high-fidelity prototype.

- **Value of Feedback:** We learned that incorporating feedback early and often saved time and improved the final product. Instead of rushing to implementation, we focused on refining the experience to align with user expectations and needs.

3. Value Tensions Shaped Design Decisions

Designing the app required balancing competing priorities and values to create an experience that felt cohesive and meaningful:

- **Balancing Positivity and Competition:** This was a critical challenge. We wanted to encourage users to grow and develop interpersonal skills in a supportive environment while also incorporating competition as a motivating factor.
    - To maintain positivity, we emphasized reflection and personal progress tracking as central components.
    - To foster healthy competition, we introduced leaderboards and challenges but ensured that these features encouraged collaboration and learning rather than creating undue pressure.

- **User Freedom vs. Guided Experiences:** Another tension arose between giving users control and guiding their journey through unlockable tasks. We resolved this by creating a progression system that limited initial options but allowed users to revisit and reflect on completed tasks. This balance ensured both structure and flexibility.

Summary

These key learnings underscored the importance of user-centric design, iterative development, and thoughtful navigation of value tensions. By continuously evaluating and refining our approach, we created an app that prioritizes user satisfaction, usability, and personal growth.

Next Steps

Given the ten-week time frame of this course, we were unable to implement several key features, including an onboarding process, a dynamic challenge log, and multi-user functionality. For next steps, we aim to build out these features while exploring opportunities to expand our product to diverse target audiences and skill sets. Potential audience groups include parents, retirees, and founders, among others. Additionally, we plan to incorporate interpersonal skills such as empathy,

teamwork, and conflict management. We believe Level Up holds immense potential to empower users to build essential skills, one experience at a time.

Thank you for coming along with Level Up’s design and development journey. Creating this project was a valuable experience from start to finish. We would like to thank Professor Landay and CA Paige Olson for an amazing quarter!