

Research

To design an app that solves a problem that users face and help them accomplish their goals faster, we did a competitor and user research. Looking at apps that were already there helped us define patterns and gave us insight on how we can differentiate. Interviewing users was the most helpful part of our research since it revealed the usability problems that we had to solve.

INITIAL IDEAS

Before diving into research, we started off by just pouring out initial ideas on what would make the weather app cool and different. A lot of our initial brainstorming explored the concept of connecting the weather app to other accounts and having it sync with people's calendar in order to remind of weather changes that affect their personal activities. The research that followed, however, made us eliminate all initial ideas. The problem we had to solve was not about adding more features, but removing old ones to simplify the way weather information is presented to the user.

COMPETITIVE RESEARCH

What do current weather apps offer to their users? The weather apps that are available to download from the app store such as The Weather Channel, WeatherBug, and Weather Underground, offer daily and future forecast, local weather, and historical data, reports about the effect of weather on health and sport activities, road conditions, and radars. The apps contained multiple pages and users should scroll and navigate to access the information.

USER RESEARCH

Interviewing users gave us a very good idea of what they need. We interviewed adult people from the age of 30-40 from the Pacific Northwest. They were asked a total of 7-8 questions to better understand when and why they check the weather, what information is of high priority for them that they want to find right away, and what appears to be unnecessary information. Our findings showed that for the mainstream user, daily activities are the main incentive for checking the weather. What matters to users is daily weather at a specific location. They prefer "more about today in a small overview versus a large overview for every day". There is a need for carefully chosen content for display. A lot of information and features such as radars, detailed data, and repetitive information is often left unnoticed. Another finding to point out is that synchronizing the weather app to other accounts or a personal calendar did not appeal to any of the users who we interviewed. One of them pointed out that "a weather app should be only about the weather and nothing more". Communicating with users helped us understand their needs, so that we can design a product that meets their expectations. We concluded that instead of adding more features, we has to remove content and simplify the information that is presented to the user.

PERSONAS

Based on the information we collected, we used sticky notes to group some of the features that our users had in common and established a few defined personas. The “compulsive peeper”, “the objective dude”, “the planer”, and the “mediocre bystander”. Things that all four have in common are:

Users want to know the weather today.

They do not like weather notifications.

They are looking for weather at a specific location.

They are frustrated with weather details that are unnecessary.

Hourly weather for today has highest priority.

They want to know whether it is going to rain or not.



SCENARIOS

Scenarios are a powerful tool to give all a say. Writing them gave us a better understanding of how and why people use weather apps and helped us define the requirements for ours. Each of the use cases we wrote focused on people who lived in different cities in the US that have specific climate characteristics. The location people occupy greatly influences which weather information they care about. The people we interviewed are from the Pacific Northwest and all they care about is if it is rainy or sunny. However,

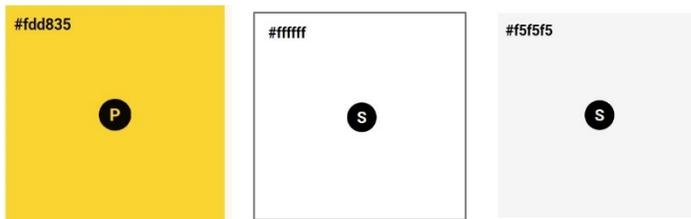
people who live in hot places or areas that are threatened by wind and hurricanes, prioritize different type of information.

VISUAL DESIGN

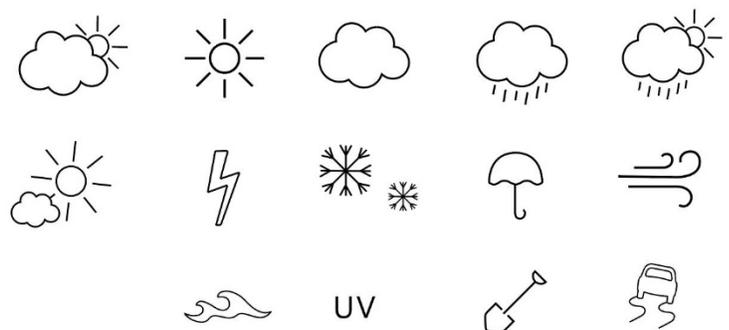
Since, the app had to be designed for android, we followed their material design's guidelines and patterns to define the structure of the app and the use of color. We created a simple tab navigation and emphasized on hierarchy and color to communicate all other information. The size and weight of the text and numbers is the main way to prioritize information and help the users find it. Important data is bigger and bolder, while secondary information is smaller in size.

We went through a lengthy process when trying to pick the colors we wanted to use. It was important for us to use colors in the hourly temperature graph to indicate high and lows, but that limited us on adding color anywhere else.

After trying out a few options, we decided that we wanted to go for a clean look by keeping the background white and using a grey tint and one accent color to create visual contrast and make it accessible for users with disabilities.



To indicate the weather, we developed a set of icons. They are geometric, consistent, and communicate the information effectively.



Since a graph is a straightforward way to communicate data, we decided on using that approach on our app. We used a gradient and a curved line to communicate high and low temperature. A number indicates significant

temperature changes. After testing the graph and receiving user feedback, we added small rain drops at hours when rain is expected.

TESTING

We created our first digital prototype using invisionapp.com and ran a second round of tests on users to see how they interact with the app when there is a higher level of visual complexity.



Users could successfully navigate through the app and commented on its simplicity. We used this user test to get more feedback on the visual design and information architecture of the app, because that is the most important content that the app is aiming to communicate successfully. We received feedback that pointed on the low and high temperature visualization when you look at the forecast for tomorrow. There was no visual contrast and it read as a single line. We improved it by positioning the low and high temperatures one under the other and decreasing the opacity of the lower temperature. It became more effective because it was consistent with the way we displayed temperature throughout the rest of the app, and it was more intuitive for the user to look up and down rather than reading it across.