**User Testing**

**Process:**

I gathered 2 of my friends to test the system and had a session with them separately for me to receive feedback on the application. I sat them down and gave them a very brief outline of what the app is and who it’s for, so something along the lines of “This is AeroSense, which is a portable air quality monitoring system for people with asthma”. I also quickly informed them of why someone with asthma would need an air quality monitoring system. I then showed them what the portable hub would look like so that they had an idea of how it would be and then I gave them my phone with the app open. I told them to keep in mind who the app is made for and to think aloud while using the app so that I could get their ideas about the user interface and understanding of the application as a first-time user. After that, I sat back in silence and just let them go through the app while writing down any feedback they provided (positive and negative). At the end of the session, I asked them some questions if I felt I needed more insight from them.

**Session 1:**

**Age:** 21

**Personal experience with Asthma:** None

**Feedback:**

* The login and register pages are simple and clear.
* Could be clearer for the user if we showed the actual parameters for the overall air quality percentage somewhere in the app (e.g. 60% - 100% = good, 40 – 50% = Medium etc.)
* Provide baselines/averages for each measurement so the user can know how much worse or better the measurement is compared to how it should be.
* The extra measurements in the “View More” section of the home page have no comparisons/ways to tell if they are good or bad.
* Add a screen where you can see all notifications received about air quality so that you can look back on recommendations given by them.
* Find a way to show the time for each bad air quality area being marked on the map on the locations page so that the user of the app can know how long ago it was detected as it may be cleared a few hours after that.

**Questions asked:**

**Q:** Do you have any feedback on the overall look and feel of the user interface?

**A:** Overall, it looked and felt clean to use but there are some parts that could have been clearer, especially with the meaning of numbers on the home page.

**Q:** How useful do you think this system would be to someone with asthma?

**A:** From their knowledge of asthma, they think that it could prove useful to a lot of people with asthma who go out a lot and maybe go on walks or runs often.

**Session 2:**

**Age:** 23

**Personal experience with asthma:** Father has asthma, so they have a decent amount of experience with it.

**Feedback:**

* The name and logo suit the app well and the logo looks nice.
* The colours on the home page are a good way of showing air quality.
* The home page is laid out in a nice and clear way.
* We should add some sort of status signifier for numbers at the bottom of the home page to signify whether they are good or bad.
* For the user asthma page, we should add in a wider variety of options for main trigger or allow the user to enter one themselves since there are a lot more things that can trigger asthma other than what we have there. For example, their dad’s asthma can often grow worse when he is around pets, and we don’t have an option there for that.
* Would be nice if we added an option to the history page to view previous weeks data so that the person can look back on it.
* Educational page is very useful and informative.

**Questions asked:**

**Q:** Were you already aware of how much air quality has an affect on people with asthma and if so, what does your dad currently do to control this?

**A:** Yes, they were aware to an extent that air quality plays a part in affecting people’s asthma which is why they have air purifiers around their house in the places he spends the most time such as the sitting room and his bedroom.

**Q:** Do you think this system would be useful to someone like your dad?

**A:** They said that they think it would benefit their dad so that he could keep an eye on the air quality at home and also at work since he has an office job and sits in the one place most the time and he could stay aware if the air quality happens to drop.