Democratize AI Project Report

User Research Plan

The stakeholder in my plan is a 23-year-old female college student that lives in Warren, MI and currently attends the University of Detroit Mercy's Nursing Program. Kaitlin graduated high school in 2015 and has attended Wayne State before transferring to Detroit Mercy. Stakeholder Kaitlin Allen was recruited because she is a new friend I had just met recently from another friend. My intention with her selection is to have no biases and a similar view from an outsider on her story and use these perspectives to come up with a project theme that would benefit a target audience similar to her.

The research plan will be conducted in-person at the Warren City Hall and Library. The plan can be conducted in one long session, or multiple short sessions.

The research plan will be going over 4 artifacts in this order. The Use Case, The AI Model, The Interface, and The Theme. I have chosen this order because I would like the theme of our project to come up as a summary of everything we created, and not staying contained to one theme throughout the creative process. I also wanted the theme and use case to be based around a problem the user experiences in her current life, and how AI would be able to fix it. Having the project be centered around a story of the stakeholder will help in making a desirable and usable AI product in a world of apps today.

I created a script to have with me as I conduct the session with the stakeholder. The script will first introduce by asking the stakeholder what they think AI is. After I get an understanding of where their mind is at, I will guide them in the right direction of what AI is, how it works, and some examples of AI in our world today. Once we understand what AI is, we will brainstorm an idea of how AI can help solve a problem they face today. Once we are able to identify a problem that could be solved, I will work with them to create the use case of how that problem would be solved with an AI app. Once we have a use case, I will let the stakeholder choose where they want to move into next. If I feel we are already moving into the AI Model or the interface, then I will help with that decision.

If we move into the AI Model, then I will be going over what an AI Model is, and what we are looking to build. I will give her examples that I used from the introduction of AI and how models are in use there. Once the stakeholder understands what an AI Model is, I will go over the use case with the stakeholder. While going over it, we will be looking for possible features that the AI will be making decisions on, and then we will be weighting them by level of importance of LOW, MED, or HIGH. I chose this weighting system because I felt it was much easier to understand and change in comparison to a point system.

If we move into the interface, then I will be opening Figma to design an interface the stakeholder has in mind. I will be reading through the pre-made script below to help guide and support the stakeholder in creation of the 4 artifacts.

Before we continue, note that the text in ALL CAPS are notes for the researcher and are not meant to be spoken out loud.

User Research Plan Script

What Is AI? How does it work? What's an example? (INTRO, TALKING)

Thanks for being with me. Before we begin, please do not be afraid to hurt my feelings. If you disagree with me, or do not understand something, stop me, and let me know your opinion. The purpose of this activity is to ***learn about your opinions, not mine (the researcher's).***

The topic of conversation today is going to be around AI and its capabilities. I would first like to start off with ***what you think AI is****, and an example of AI in our world today*

WAIT FOR RESPONSE. REPLY APPROPIRATELY

*So, **a definition of AI** that most people can grasp is that AI is the collection of tons of data, when then uses that data to automate decisions that humans would usually make. Here is **an example of how AI works** within the dating app Tinder. Don't worry, I know you didn't swipe right on me, but it's okay; I will try to ignore it. Tinder has a couple of different ways it leverages AI in its app. It's most recent AI addition to its app is utilizing AI to determine if someone is real behind an account. It uses a photo verification feature of selfies and compares them to the existing profile photos. It uses this result to make the decision on whether or not the person is indeed who they say they are, and marks them as verified on the app.*

***Another example of AI** in our world is in YouTube. As you may have noticed, after watching just one video on YouTube, it will change all its recommendation videos based on the video you just watched, and they always suck you in. The AI behind this is the gathering of TONS of data from people who watched that same video. AI will watch the user select the next video to watch after that, as well as look for similar keywords from the video the user just watched. After building up tons of data, the AI will be more accurate in recommending a video to watch next.*

***To sum AI up in one sentence**: AI are algorithms, based on patterns, that automate decision making that humans used to have to do themselves. Does this help you understand how AI works?*

WAIT FOR RESPONSE. REPLY APPROPIRATELY
GET READY TO TAKE NOTES FOR NEXT SECTION

Use Case Generation (TALKING)

*Now that we have a decent understanding of what AI is, let's talk about **a possible use case** that AI would be useful in your life. Can you think of any ideas that could be solved if AI was there to collect tons of data and use that to automate a decision?*

TAKE NOTES NOW.
LOOK FOR FEATURES SHE LISTS THAT WILL HELP BUILD THE USE CASE SCENARIO AND THEN THE MODEL FEATURES FROM THAT USE CASE
WAIT FOR RESPONSE. TALK ABOUT PERSONAL PROBLEMS SHE FACES IN LIFE TO GENERATE IDEAS.
THEN ASK WHY. KEEP ASKING WHY UNTILL YOU FIND A SOURCE (see next paragraph for source ex:)
THEN ASK HOW AI COULD HELP THEM SOLVE THAT PROBLEM
ASK IF SHE WOULD USE IT, HER FRIENDS WOULD USE IT, SOMEONE LIKE HER WOULD USE IT

IF STILL NO RESPONSE, GO TO **BACKUP THEME: AI that helps people plan social events.**

So, what we have just done here is build a use case of AI in your life. What I want to do is create a paragraph story based on what we just talked about. I am going to write it down out loud, so we are both on the same page throughout the story. If you notice any problems, or you think I have worded it wrong, stop me and let me know. This is about your opinions, not mine.

READ NOTES, **GENERATE THE SCENARIO/STORY** YOU JUST TALKED ABOUT WITH HER

*Now that we have a story in which AI can help in your life, what would you want to talk more about? Would you want to talk about **how the AI APP would look** like on the phone or computer? **OR***

*would you want to talk about **how the AI APP would work**, meaning the features of the AI and how it would make decisions?*

MODEL GENERATION (TALKING)

What does the Model of the AI do? It is simply the mind of the computer. The reasons behind the decision making.

*We are looking to identify the following: **What features are being used to make decisions**, for example: YouTube's video history feature that recommends the next video to watch, or YouTube's key words feature that also recommends the next video to watch.*

*While we are identifying features, I will also ask you **how important each feature should be in determining the final output**. Using the last two examples I just went over, which one should be most important in determining the next YouTube video? Would it be the key words feature that has the bigger voice? Or does the video history feature have a higher importance in determining the next YouTube Video?*

Let's go back through your use case to see what features could be used. I can read it out loud and we can stop when we see a possible feature, or we can both read it silently and when we see a feature, we can voice it out loud and talk about it. Which would you like to do?

READ PREVIOUS USE CASE, LOOK FOR FEATURES
AFTER IDENTIFYING FEATURE, STOP AND FIGURE OUT IT'S WEIGHT
WHEN WEIGHING A FEATURE, I BELIEVE IT WILL BE EASY IF YOU DO THE FOLLOWING:
WEIGH BY LEVEL OF IMPORTANCE: 1 BEING LOW, 2 BEING MEDIUM, 3 BEING HIGH

EXPLAINABLE INTERFACE CREATION (FIGMA)

How will the app or interface look like? How will the user understand why they are seeing what they are seeing? These are the main questions that will be answered in this section.

To help me put your ideas into a design, I will be using a design software called figma. We will be working side by side, with you telling me what you want me to do, and me implementing it within Figma. If you feel that I am asserting control over the interface or want to change something that better resembles your thoughts, stop me, and let me know.

To begin, lets' go back to the use case scenario we created to get an idea on where the app comes into play, and then we can focus on how the app will look when you go to use it.

FIRST, OPEN FIGMA WITH HER NEXT TO YOU. THEN
GO BACK AND READ OUT LOUD THE USE CASE. STOP WHEN YOU COME ACROSS THE USE OF THE AI APP
THEN GENERATE IDEAS OF HOW IT WILL LOOK. IMPLEMENT IDEAS IN FIGMA WITH HER CONSENT
REMEMBER TO TALK ABOUT HOW THE USER WILL UNDERSTAND THE APP'S RESULTS = XAI

THEME GENERATION (TALKING + SUMMARY + FIGMA)

*Let's try to **create a theme** that incorporates our thoughts here into one short sentence. For example, if we talked about how it was such a problem with hanging out with people after you graduate, and the reason why is because coordinating schedules and location to hangout was the main issue, then our theme would be: AI that helps people plan social events.*

End of User Research Plan Script

User Research Results

Location, Duration, and Date

The plan was conducted outside at the Warren City Hall and Library with stakeholder Kaitlin Allen. It was conducted with a 3-hour session on Tuesday, with a 1-hour session on Friday.

Tuesday Audio Session

After sitting down and setting up, I begun the research plan by reading from the script. Having Kaitlin describe what she thinks AI is, and then giving an example of AI models that are currently in use today. (0:00 to 3:50).

After she gets a decent understanding of what AI is, I ask her to think of ideas that could be useful that AI would be helpful in. The difficult process was coming up with a theme of AI being used to solve a problem she is having. She first suggested GPS, but that is already being solved by multiple organizations. She then mentioned a job recommendation app for students, but after explaining and going through that it isn't actually that hard to get a job, we continued on brainstorming ideas. Lots of time went by until Kaitlin offered the idea of AI helping pay for college. I narrowed it down to scholarships and grants, which I wish I had not and just kept the generic theme of AI that helps pay for college, as we both agreed this was a problem where AI would be useful in solving. In the audio recording, the theme is different, but after having time to review the session, **the theme is best stated as: AI that helps students pay for college**. (3:50 to 29:00)

Now that we have a theme and idea of where AI can be used to solve a problem, it is time to come up with a use case scenario. I worked with Kaitlin to develop a story about how it the app would be used in her life. We did this by going into her past when she could have used it most in 2015 when she used a scholarship book get enough money to pay for college. Here is what I wrote in my notebook during this section:

Use Case Story

In 2015, Kaitlin just graduated high school and is preparing to go to Wayne State University. Her grandparents from Florida were very generous and were able to cover the costs of attending there for the whole year. She didn't have to worry about financials at all and attended Wayne State without any anxiety relating to her financials.

One year later, a crisis occurred. Kaitlin needed to stay home and help her mother raise her siblings. During this time, Kaitlin took a year off school to help her mother and work full time to help pay for next year's tuition at Wayne State. As the month's went on working full time as a waitress at Red Olive, she realized she wouldn't have enough saved to pay for the upcoming tuition bill to attend Wayne State again. Her aunt Jenny hears of her struggle and recommends an app that will help her pay for college. She tells Kaitlin the app helped her kids pay for their college, so Kaitlin is intrigued by the ideas and downloads the app. After installing it, it prompts her for the following information: (29:00 to 1:02:00)

1. What degree is the user going into
2. Where user is attending college
3. Nationality, race, gender, age
4. Sports or other activities she does
5. GPA, SAT, or ACT scores
6. Work experience if any

After everything is submitted, she is directed to the interface that showcases a list of scholarships that are sorted by Easiest (to attain). Under this are a list of scholarships that the app has determined are easiest for her to apply to, as well as her chances of getting the scholarship. She selects the first scholarship on the list. The app opens to a new page and shows details and information about the scholarship like:

1. Name (who is the scholarship from)

2. Amount
3. Deadline
4. Why did the AI show it
5. How to apply (apply by answering the questions below)

Kaitlin reads through the information provided, and wants to apply to this scholarship, but not on the phone, nor right now. She saved the scholarship to a list by clicking the heart button next to the scholarship. She backs out to the main screen and looks for other scholarships to create a list of her top 5 to apply for later. (1:02:00 to 1:31:18)

End of Use Case Story

Start of AI Model Building

Feature	Weight
Relevant to User (degree, college, nationality, race, gender, age, sports, etc.)	LOW
Deadline to Apply	MED
Amount of Money	HIGH
Odds Based on Number of Applicants	HIGH
Success based on Similar Previous Applicants	HIGH
Number of Questions (for a scholarship)	MED
Difficulty of Questions (for a scholarship)	MED

After the end of the use case story. Kaitlin and I started building the model. I first gave her examples of what we can expect the features of the model will look like, based of some examples from YouTube. After she has a grasp on what we will be doing in the Model Building Session, I start re-reading the use-case story. As I am reading, we are both looking for possible features that we can see would make sense based on the use case story. I read and we stop when the app is being used and we generate features there. After generating the list of features shown above, we go through them again and assign weights to them to create the AI Model. (1:31:18 to 1:56:00)

End of AI Model Building

End of Tuesday Audio Session

Friday Interface Session

After sitting down and setting up with my laptop facing both of us side-by-side, I recapped what we have done so far, and went into the interface plan through Figma. I first started by reviewing the features and adding them to Figma for quick reference (0:00 to 6:00).

Once we added the features and weights to Figma, we went into building how the application would look. I decided to stick to the iPhone screen size with her to stay in-line with the use case story. We are skipping the log-in screens as they are not as important at this time; we just want to see the output screens. I gave her 3 different blank color sections to work off of to help her generate some ideas on what would go in them. From them we made a header that shows the easiest label, and we made a list of boxes below that had different scholarships ranked by easiest to attain. I added 3 hypothetical scholarships as examples, and noticed money being the first thing she wanted to see. We then added the option to sort scholarships by different features, allowing the user to decide how they want to view their list. (6:00 to 27:00)

After creating a basic view of the output screen, we want to create the next screen that would show up for the user upon clicking on the scholarship they were interested in. Referring back to our Tuesday Session,

this screen would show the name of the scholarship, the amount, the deadline, why did AI show this, and how to apply. I did not reference this during the session, but our interface was still aligned with what we were thinking on Tuesday. (27:00 to 51:00)

We talked about having the option to favorite a scholarship and make a list during Tuesday's Session, so I added this into the application interface. I did not have internet connection at the time, so I was unable to use a heart like we had talked about. For that reason, I used a triangle to be able to access a list of favorites, as well as click on next to a scholarship name to make it a favorite and add it to the list (51:00 to 56:00).

Lastly, I wanted to test her AI Model against herself in order to determine if we need to tweak her model to better represent her decisions. To do this, I created three random scholarships to put her model and herself to the test. Here are the 3 scholarships:

Warren Garden Scholarship	Bread Scholarship	FEV Scholarship
$300	$1000	$1500
Timeline: 3 days left	Timeline: 30 days left	Timeline: 30 days left
High Level of Success	Medium Level of Success	Low Level of Success
Easy Difficulty Questions	Medium Difficulty Question	Hard Difficulty Questions
1 question total	3 questions total	5 questions total
80% obtainable	75% obtainable	30% obtainable

	Warren Garden	Bread	FEV
Kaitlin's Rankings	3	1	2
AI Model Rankings	2	1	3

I noticed she gave a higher importance to the money in comparison to the success and obtainability. For that reason, I changed to model to represent her weights better. The changed weights in red. I could also change the deadline to apply as low, but I need further tests before making any more changes. (1:04:00 to 1:12:00)

Feature	Weight
Relevant to User (degree, college, nationality, race, gender, age, sports, etc.)	LOW
Deadline to Apply	MED
Amount of Money	HIGH
Odds Based on Number of Applicants	MED
Success based on Similar Previous Applicants	MED
Number of Questions (for a scholarship)	MED
Difficulty of Questions (for a scholarship)	MED

End of Friday Interface Session

Following the end of Friday's Interface Session. I went ahead into Figma to create a section for myself. This is where I plan on taking what the stakeholder had in mind when we created the interface during the session and use that to create a more professional and modern version.

Reflection on Research Experience

What worked well

The things that went well during the research experience are the following:

1. **The model building of features and their weights**. We were able to generate AI capable features without that much of a problem. Using a weighting system of LOW, MED, HIGH level of weight was very easy for her to understand as well as myself in comparison to using a point system weightage.
2. **The use case story seemed to come naturally**. Because of the way we identified a problem in the stakeholder's life that could be solved with the use of an AI app, the story was honest, and they could have genuinely used the app to solve that problem themselves.
3. **The testing of the AI model against the stakeholder's thoughts**. It allowed me to determine if the model was aligned with her own perspective. Upon completion of the test, I could tell her model would have ranked scholarships differently. This allowed me to shift the weights during the session. If I had more time, conducting more tests is something I highly recommend making sure the AI model is as accurate to the stakeholders as possible

What did not work well

The things that did not go as well as I had initially planned are:

1. **It was difficult to come up with a theme with the stakeholder.** Being asked on the spot, what are some problems in your daily life that you want to share with me can be a question that is tough to answer on the spot and usually can take a couple days to answer honestly.
2. **I couldn't tell when I was inserting to much of my opinions into the sessions.** After reviewing the audio and conducting the sessions. I find myself doing the majority of the talking. I feel as a designer you want to design something good and on topic, so I am not sure of how much of the design I should be letting the stakeholder take the lead on. I also don't know if I can put the pressure of generating design ideas on the stakeholder and they are able to do so, while staying relevant to an AI use case.
3. **The interface session might better be done online via share screen feature.** I say this because it is hard for both people look at one screen in person. You could also share the screen to a big TV where you can both see it easier; I did not have this option at the time. I also noticed it was hard for her to do anything in figma because I gave her no control. If it was online, she could mess around inside the app and learn how to drag and drop stuff or tell me exactly where she wanted something without having to worry about bumping elbows with me in person. The sun also made the screen hard to see, but I was unable to find a spot inside the Warren Library, so we had to do it outside. To make it easier for her to see the sections in figma, I made them very vibrant colors to easily distinguish.

Changes I would make to my plan

Looking back in hindsight, here are the changes I would've made:

1. **Test the AI Model against stakeholder's thoughts after the creation of the AI Model and its weights, not after the creation of the interface.** While this did not affect my ability to conduct meaningful sessions, I think having the model tested before we enter the interface section would have made a more accurate interface. For example, when making the interface I noticed she valued money more than the easiness off applying and getting the scholarship. If I knew this before advancing to the interface, I believe scholarships would have been sorted by highest amount and not by the easiest to apply for and receive the scholarship.
2. **Conduct the interface session over Zoom, and not in person.** This would have allowed her to give more of a design input during the creation of the interface in Figma. She would not be restricted to viewing my screen at a weird angle and trying to point or tell me where she wanted something to go. She would have been able to open figma with me on her own screen and use her mouse to drag, drop, or point to where she wanted something to go.

3. **Plan to create a theme with the user in the *beginning* with use case, not at the end**. While it was not officially apart of my plan, this is what I ended up doing. Being able to be flexible with your plan as you conduct it is very crucial and something I was able to accomplish. However, I wish I would have planned it as close to the session results as possible by having theme creation in the beginning and not at the end.

Supplementary Materials

Tuesday and Friday Sessions: Google Drive Link
Friday Interface Session: Figma Interface File Link