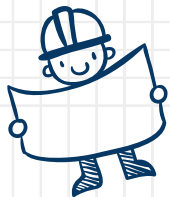


# SCREW IT



Home Improvement

Medium-fi Prototyping



CMPSC 185 || Annika Damstedt, Hannah Zhang, Krystelle Baluyot



# Meet the Team



**Annika Damstedt**

'27

Computer Science



**Hannah Zhang**

'27

Computer Science

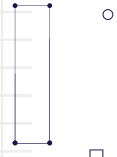
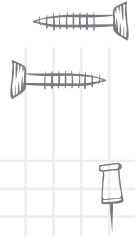


**Krystelle Baluyot**

'27

Computer Science

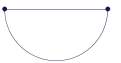
# SCREW IT



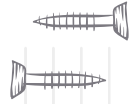
## The Problem



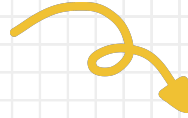
Renters and homeowners who are new to home maintenance often lack clear guidance on identifying household issues. This guidance is necessary to determining whether they can handle repairs themselves or whether they should hire a professional, as well as how to complete DIY repairs safely and find a reliable expert.



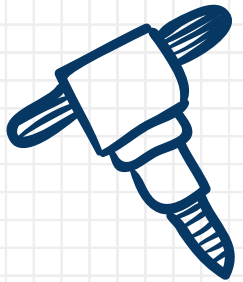
# SCREW IT



## Our Solution

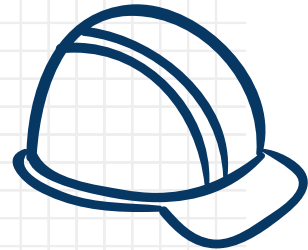


Use AI to identify home maintenance issues, compare DIY versus professional options based on cost, risk, and feasibility, and provide step-by-step guidance for completing the repair independently or choosing the right professional.



01

# Tasks



# Our Tasks



## Simple

The user can **identify** the home maintenance problem.

(Simple first step is figuring out what issue is happening, all users would do this)



## Moderate

The user can **compare** the DIY and professional solutions.

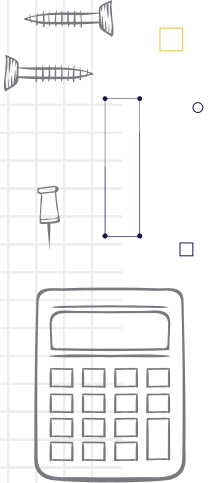
(Main purpose of our solution, helping users understand how best to solve the issue through comparison, most users will do this)

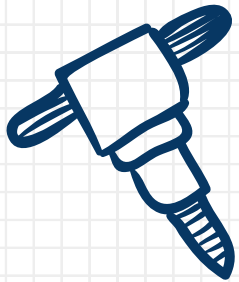


## Complex

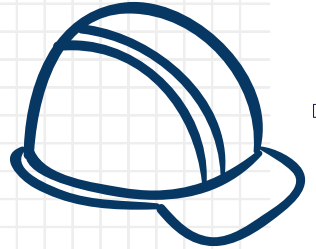
The user can **learn** how to fix the home maintenance problem.

(Teaching users how to solve the problem on their own, not everyone will be interested in this step)





02



# Usability Goals & Key Measurements

# Goals & Measurements



## Intuitive Navigation

Navigation errors #

Is our app easy to navigate? Does it feel intuitive?

## Perceived Helpfulness

Rating of 1-5

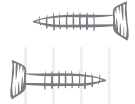
Did our app feel like it helped you accomplish the task? Would you choose to use it for an actual problem in the future?

## Would it help you learn?

Subjective

Did our app feel like it would help you grow your home maintenance skills?

# Progress



## Intuitive Navigation

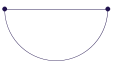
During testing, users often navigated to the wrong area for the task they were given. We plan to change the wording of the tasks and add descriptions to make it clearer what the app is doing in each area.

## Perceived Helpfulness

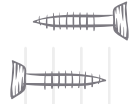
Most users said the app seemed helpful, but didn't find one of our most helpful features, the AI assistant. We plan to make it easier to find the AI assistant, making the buttons clear it is AI and putting them in more prominent locations (the home page, for example).

## Would it help you learn?

We need to add videos and AR to go along with the DIY instructions. Home maintenance is a unique skill that needs video in order to learn properly, and our previous design did not incorporate that.



# Necessary Changes



## Intuitive Navigation

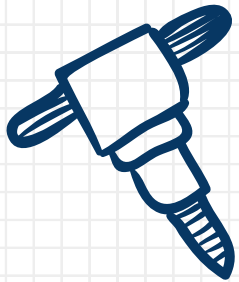
In the future, we need to make sure there are descriptions for the features we want to add since it was not intuitive for everyone in testing to figure out what everything did. Additionally, adding a quick tutorial would help significantly.

## Perceived Helpfulness

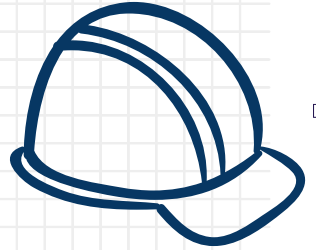
We need to make AI as a tool for helping you learn a more prominent feature of our app, and make sure it is the focus whenever we add something new.

## Would it help you learn?

We need to consider different needs and learning styles when considering the best way to guide people through learning home maintenance.

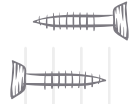


03



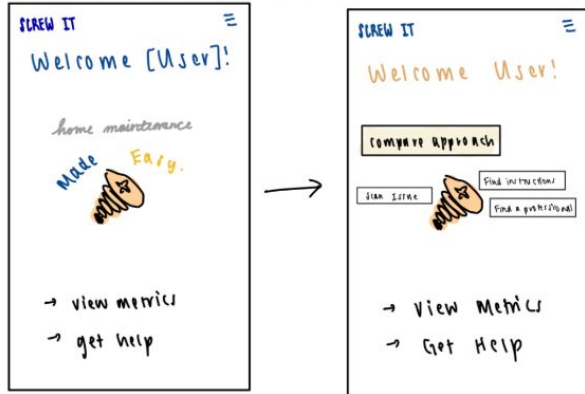
# Revised Interface Sketches

# Change #1



## PREVIOUS

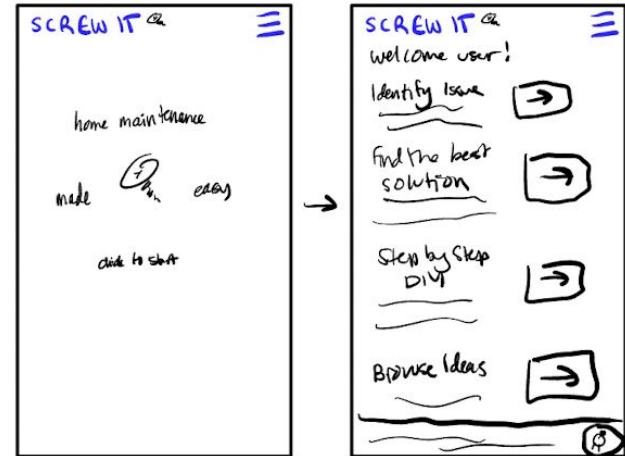
Home screen had ways of getting to each task separately, but the wording left people confused.



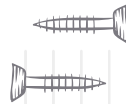
## Revised the home screen

## NOW

Home screen navigation is clearer, with descriptions of each task to understand its purpose.



# Benefits for Change #1

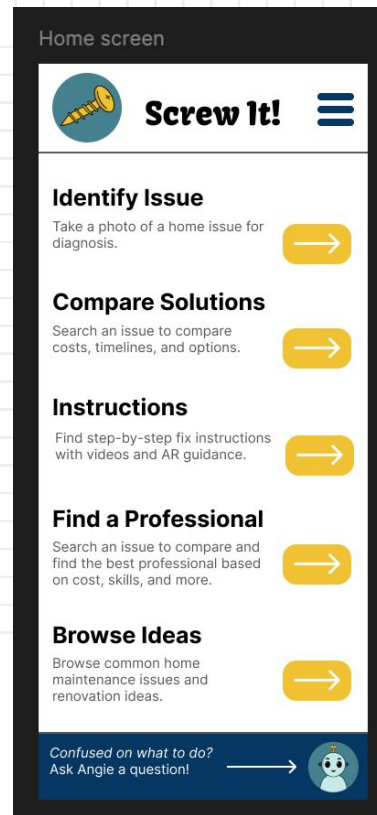


## Intuitive Navigation

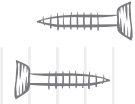
Because there are descriptions for each section, new users can easily figure out the features of the app and where they want to navigate.

## Perceived Helpfulness

With the abilities of the app being clearly laid out, it is easier to understand what the app can help you with.



# Change #2

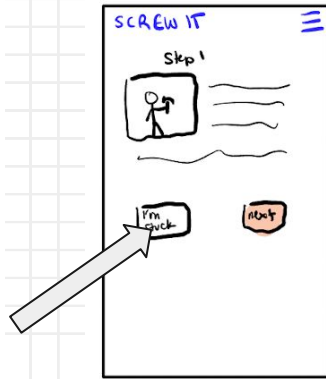


## PREVIOUS

AI assistant was hidden behind other navigation without clear labeling.

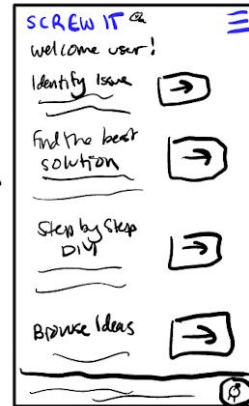


## Making AI more noticeable



## NOW

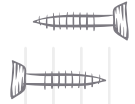
AI button is clearly for AI and appears in more locations.



AI Assistant suggestions of what to ask AI



# Benefits for Change #2



## Intuitive Navigation

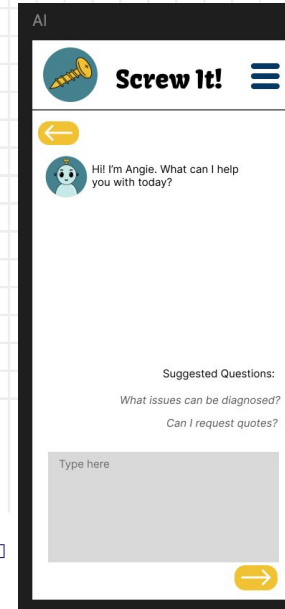
Making the AI more noticeable and consistent across screens helps the user know how to find the AI.

*Confused on what to do?  
Ask Angie a question!*

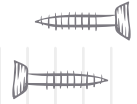


## Would it help you learn?

People being able to find the AI will help them learn since the AI can answer questions they are confused about when following instructions.

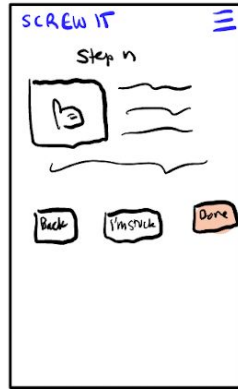
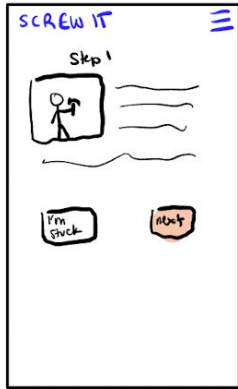


# Change #3



## PREVIOUS

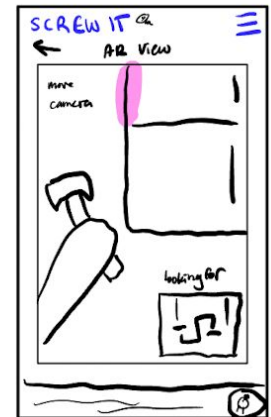
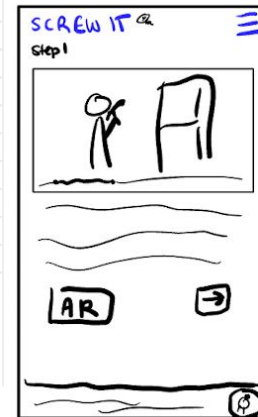
Only text based steps guiding users through how to solve the problem.



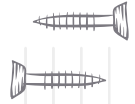
## Adding video and AR for DIY instructions

## NOW

Finds relevant video tutorial, has text based steps associated with time stamps in the video, and has a button to switch to AR guidance for a step.



# Benefits for Change #3

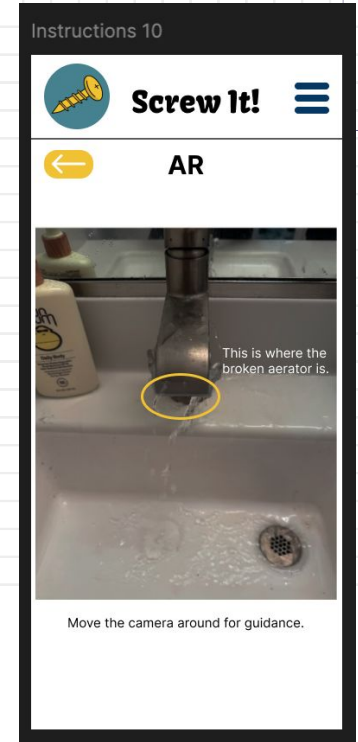
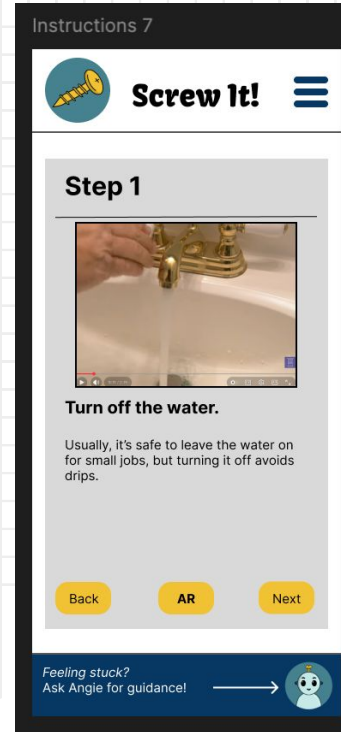


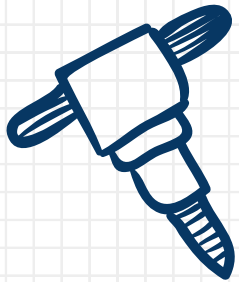
## Perceived Helpfulness

With more personalized and easy to follow guidance for following instructions, the helpfulness of the app for helping fix home maintenance issues would increase.

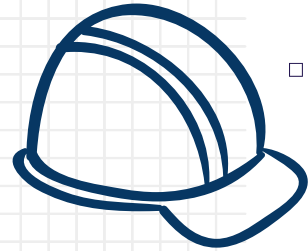
## Would it help you learn?

Videos are more helpful for learning home maintenance. Additionally, AR can help with any confusion when the videos setup is different from the one you have at home.



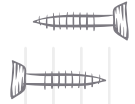


04

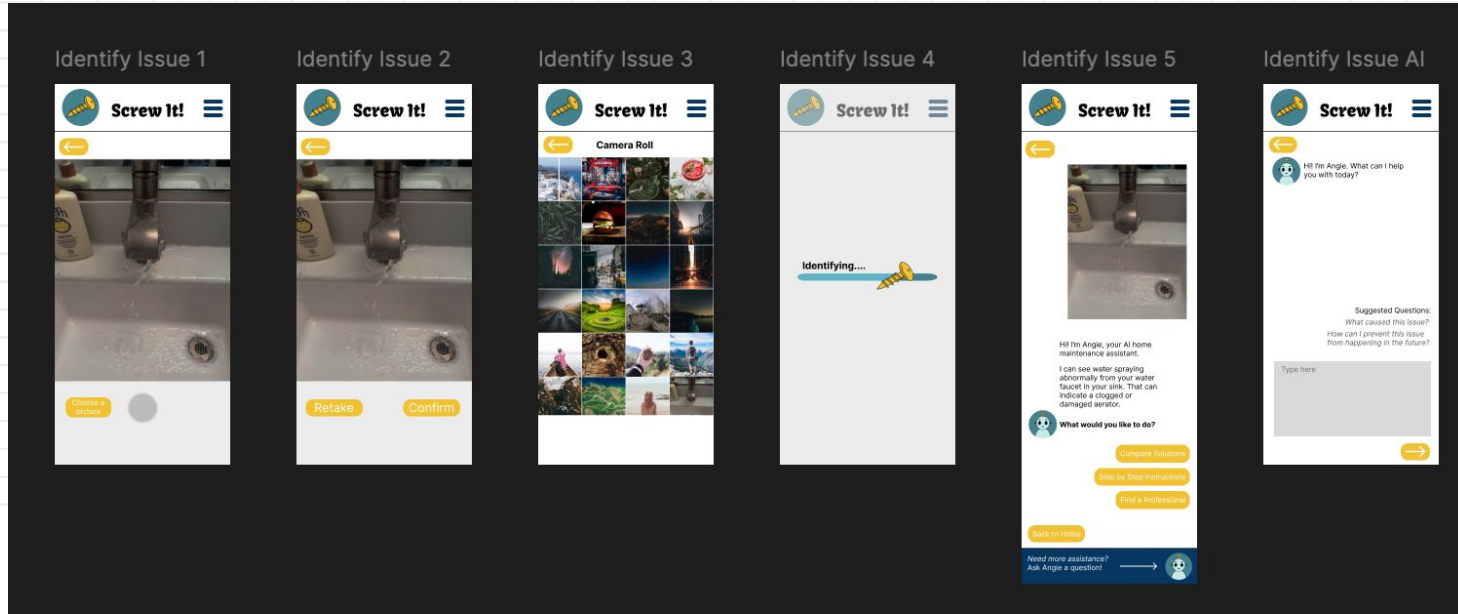


# Medium-fi Task Flows

# Simple

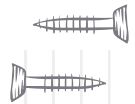


The user can upload or take a picture to identify the maintenance issue



# Moderate

The user can compare the DIY and professional solutions

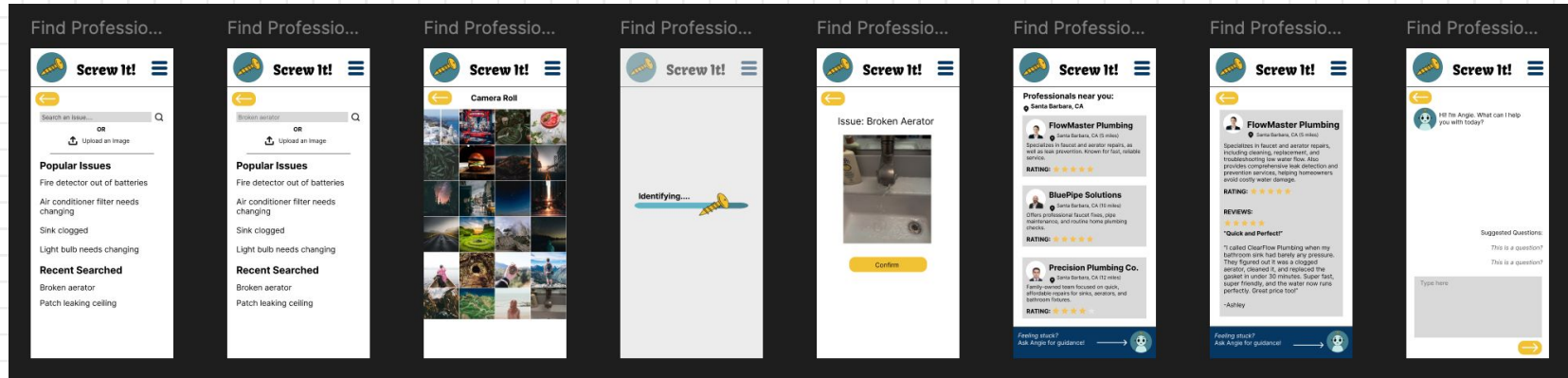


Detailed description: The image displays a sequence of eight mobile app screens from a 'Screw It!' application. The screens show the search process for a 'Broken aerator' issue, the identification of the problem, and a comparison between two solutions: 'DIY (Do It Yourself)' and 'Professional'. The DIY option is estimated to cost \$10-30 and take 5-30 minutes, while the professional option is estimated to cost \$70-150 and take 15-45 minutes. The professional option is highlighted as the recommended choice. The interface includes search bars, category lists, image galleries, and detailed text descriptions for each solution.

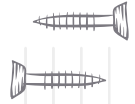


# Bonus Moderate

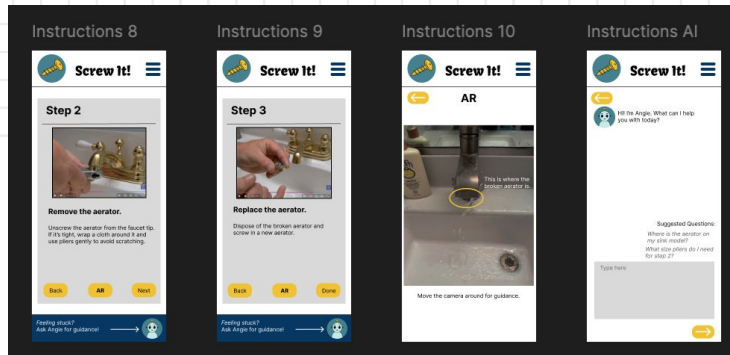
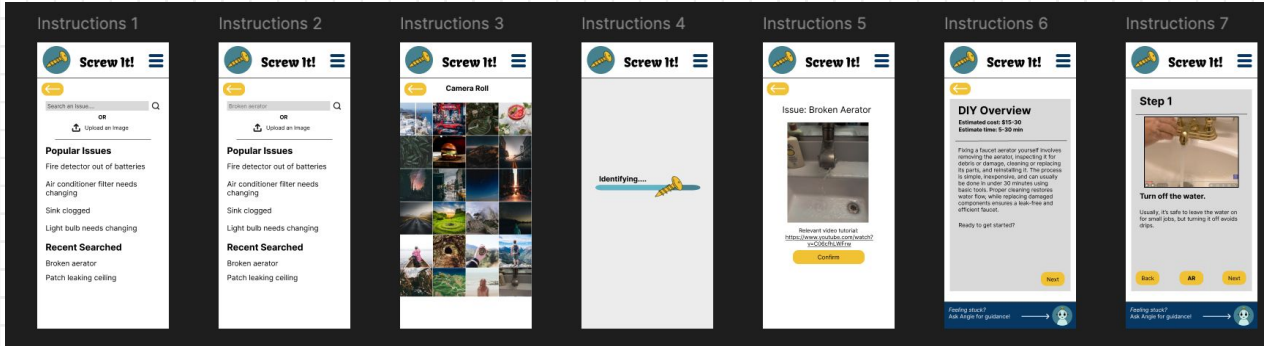
The user can find a professional

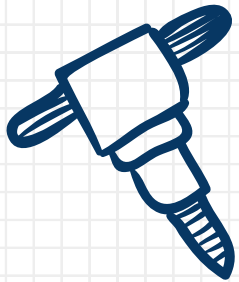


# Complex

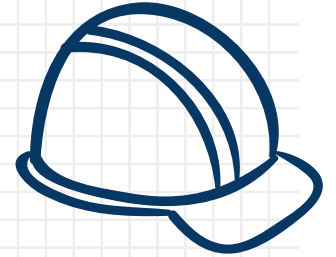


The user can learn how to fix the home maintenance issue



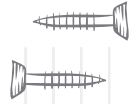


05



# Implementation

# Figma



## Pros:

- Prototyping allows us to mimic the flow of tasks
- Easy to make a nice design
- Easy collaboration

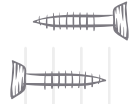
## Cons:

- Tricky to learn
- Requires hard coding

## Why pros/cons tradeoff was acceptable:

The ability to prototype our features without having to make sure they actually function helps us to mimic our app without spending the amount of time it would take to actually create it.

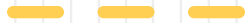
# Figma



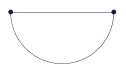
## Limitations:

- Can't actually chat with our AI
- Can't test what using AR would feel like
- Can't test video playback
- Can't test finding relevant video
- Can't test how long the loading screens would actually take

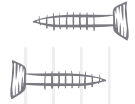
# Wizard of Oz + Hard Coded Features



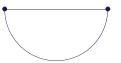
- The issue is always for a broken aerator
- Video shows screenshots instead of video playback
- AR is just a photo and cannot show moving around and 3D features
- AI doesn't respond
- The professional services and reviews are not real and made up

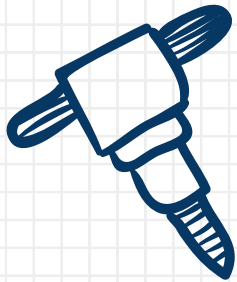


# Impacts

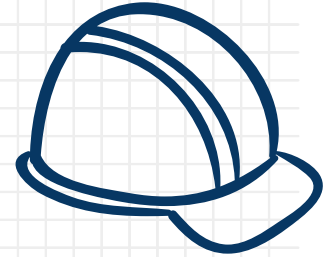


- Don't know how helpful video or AR is for **helping you learn**
- Navigation may feel more **intuitive** than it actually is when there is only one searchable option
- Since AI can't be tested, it's hard to know how **helpful** it would be





06



# Appendix / Figma Link / README link

<https://www.figma.com/design/IMQ2zVDXd33DWxsgweU8iZ/Screw-I-t-Medium-Prototype?node-id=0-1&t=TU1RER97Okq5V089-1>

[https://docs.google.com/document/d/16BWY568Y4\\_TntKKpzoCnQJgse3vllL25CPi67viPS2c/edit?usp=sharing](https://docs.google.com/document/d/16BWY568Y4_TntKKpzoCnQJgse3vllL25CPi67viPS2c/edit?usp=sharing)