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# Needfinding for Home/Car Maintenance

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



# Meet the Team



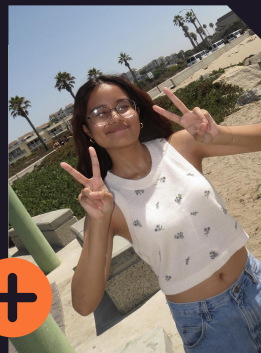
**Annika Damstedt**

Junior  
Computer Science



**Hannah Zhang**

Junior  
Computer Science



**Krystelle Baluyot**

Junior  
Computer Science



# Project Domain

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What are skills that all adults have to use?

What is an area we would like to learn more about?



**Home/Car Maintenance!**

What do people not enjoy doing but would benefit from learning how to do?

Where does information break down in practice?



# Finding Participants



01

## Lives in a house

Would they benefit from learning home maintenance?

02




## Diversity

Gender, culture, lifestyle, occupation...

03

## Past experience

Have they ever done home maintenance?  
How much do they know?





# Questions We Asked

What comes to mind when you think of the word “home maintenance”?

Have you ever done a home renovation project before?

Can you describe a time when you had difficulty or failed with doing home maintenance by yourself?



Let's say that an indicator shows up on your car dashboard. Walk me through the steps you would take to try and fix the problem.

Do you think you could ever repair something to the level of a trained home maintenance professional?

How often is there a home maintenance task that needs to be completed? And what would you do in that situation?



# Interview 1



“I’m not capable of doing [home maintenance].”

– Y.J.

## Team member roles:

- **Interviewer:**  
Annika Damstedt
- **Recorder:**  
Krystelle Baluyot

Location: In person  
(UCSB Library)

# Say Think

On home renovations (painting her room), "It was pretty fun."

"Time consuming"

"Hard work"

"I've never seen this symbol in my car, is it dangerous?"

Wants to spend time learning and doing other things instead of home maintenance

Not being able to do home maintenance can be judged

Home maintenance is too complicated to learn

On if she would personally learn home maintenance, "Not really. Personally, it's just not my area I want to explore."

"I would be so happy" if someone could do it for me

"I'm not capable of doing [home maintenance]"

(Professional) Help from others is better than doing it herself

Did more home renovations than home maintenance

Would prefer someone else to solve the problem

Fidgety when asked about learning home maintenance

Would call partner, mother in law, or facilities if there was a problem

Asked people she knew for best cleaning supplies



Guilty about not wanting to do home maintenance

Surprised by how little she thought about it

Afraid of social judgement for not doing home maintenance

Asked for help in stores on what tools are needed when doing home renovations

Checked Youtube on how to fix a clothes washer

Would try the easiest solution (turning on and off the water heater or electric breaker)

Paused for a while to remember when was the last time she did home maintenance

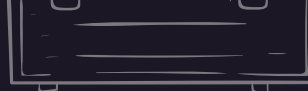
Unaware about car maintenance

Reliant on (professional) help

Fear of making the problem worse

Intimidated by how complex home maintenance is

# Do Feel





# Analysis



## 01 Insights

- Not everyone feels the need to learn about home maintenance
- People rely on others they know personally rather than calling for professional help first



## 02 Observation

Willing to ask for help when she didn't know how to do something

## 03 Need

Professional help is sometimes the best way to solve home maintenance issues.



## Interview 2



“A lot of people who own houses don’t know what they don’t know.”

— E.K.

### Team member roles:

- **Interviewer:**  
Hannah Zhang
- **Recorder:**  
Krystelle Baluyot

Location: On the phone

# Say Think

"[Home maintenance] is not what [her and her husband] do."

On where her husband learned home maintenance, "Human to human pass down knowledge."

"Time is really valuable especially after you have kids"

"It's satisfying to work on your own house"

The hardest part about maintaining a house is having enough money for it

Time is very valuable

Important to make enough money to pay for home maintenance



Plumbing and electrical tasks are what people tend to ignore or ask for professional help on

Patient people would be good with home maintenance

Technology can help a lot with assisting on home maintenance

DIY-ing complex home maintenance tasks could cause lots of damage

"I don't know...I'm not interested in learning"

"It was so important for me to marry someone who knew how to do [home maintenance]."

"A lot of people that own houses don't know what they don't know"

On whether AI or real people are more helpful, "I think there are benefits to both"

"I would call because it's easy."

Robots that could do chores would be helpful technology



Would ask neighbors for assistance if she wasn't married to a carpenter

"Put off" maintenance tasks until it goes away

Paused for a while to remember when was the last time she did home maintenance

Took pictures of maintenance issues and asked Chatgpt

Uninterested in doing bigger home maintenance tasks

Hopes maintenance workers that she calls are respectful and skillful

Taking care of your house is an important task

Spoke passionately about how useful AI was for home maintenance tasks

Seeks out a person only after AI fails to help

Could do easier home maintenance tasks (e.g. hanging a mirror)

Calls professionals for help on more complex tasks (plumbing, etc.)

Reliant on AI (Chatgpt) for help

Grateful to have a skillful husband and father

Responsible of financial tasks in the office rather than doing home renovations herself

Frustrated when she gets stuck during tutorials when she can't see the step clearly

Satisfied with home renovations

# Do Feel





# Analysis



01

## Insights

- Does some home maintenance but focuses more on home renovation
- Time is very valuable to her (especially as a mother)



02

## Observations

Uses AI to guide her on how to fix home maintenance problems

03

## Need

An efficient assistant that keeps track of home maintenance



## Interview 3



“If you don’t do it, nobody else does it for you”

— N.N.

Team member roles:

- **Interviewer:**  
Annika Damstedt
- **Recorder:**  
Hannah Zhang

Location: N.N.’s office

# Say Think

"If you don't do it, nobody else does it for you"

"Used to be a delegable thing"

"Home maintenance is expensive"

"If it takes more than four to five hours, it's probably not worth it for me"

Learning home maintenance is an enjoyable challenge overall, and he would like to learn more

Would rather do it himself if he can

He started thinking of home maintenance more when he bought a house.

"Repeatability of car maintenance tasks is not that frequent, but for home maintenance tasks if you learn how to do something it will probably be useful every month"

"[When] I'm learning it for the first time and I am able to invest [more] time"

"First time I started to use a drill was 8 months back when we got a house"

Considers cost of hiring professionals as a reason to do it himself

Doesn't think there is an expectation that he knows home maintenance

Home maintenance is a useful and frequently used skill



Attempts basic home maintenance tasks like fixing a sink stopper

Paused for a very long time when considering if he would want to learn car maintenance

Always tries to solve the problem before calling a professional

Feels annoyed at having new tasks come up

Worries about whether professionals are overcharging

Feels accomplished when finishing a home maintenance task

Smiled a lot and very expressive when describing how learning home maintenance was like exploring a game map

Relies on YouTube for learning home maintenance

Helps partner with home renovation rather than doing it himself

Didn't learn home maintenance until he had to.

Bored/annoyed at the idea of long (5+ hours) home maintenance tasks

Diligent to ensure that his personal home maintenance work is satisfactory

Upset that instruction manuals often don't match a particular home's version of product

Enjoys the process of problem solving

# Do Feel





# Analysis



01

## Insights

- Gave up on learning home maintenance when he didn't have the right tools
- Wishes he knew more about home maintenance



02

## Observations

Was resistant to learning car maintenance.

03

## Need

Something explaining the most important tools and skills.

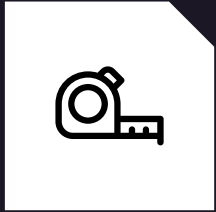




# Key Learnings

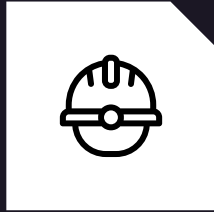
- **Home maintenance knowledge exists on a spectrum**
  - Interviewees ranged from a home renovation company employee to a renter with minimal home maintenance experience
- **Many existing resources are too generic**
  - Interviewees reported relying on Youtube videos and instruction manuals, but the information they gathered often didn't apply to their own homes
- **Practice builds confidence**
  - Interviewees reported more willingness to learn home maintenance after completing a few manageable tasks

# Next Steps



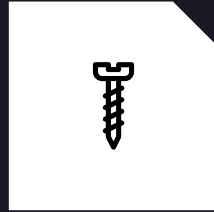
**01**

Interviewing more extreme users (i.e. home maintenance workers)



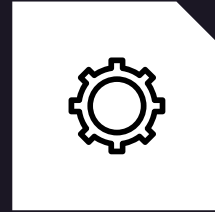
**02**

Analyze new data and discover new insights and observations



**03**

Narrow down to a specific problem domain



**04**

Generate HMWs and POVs

