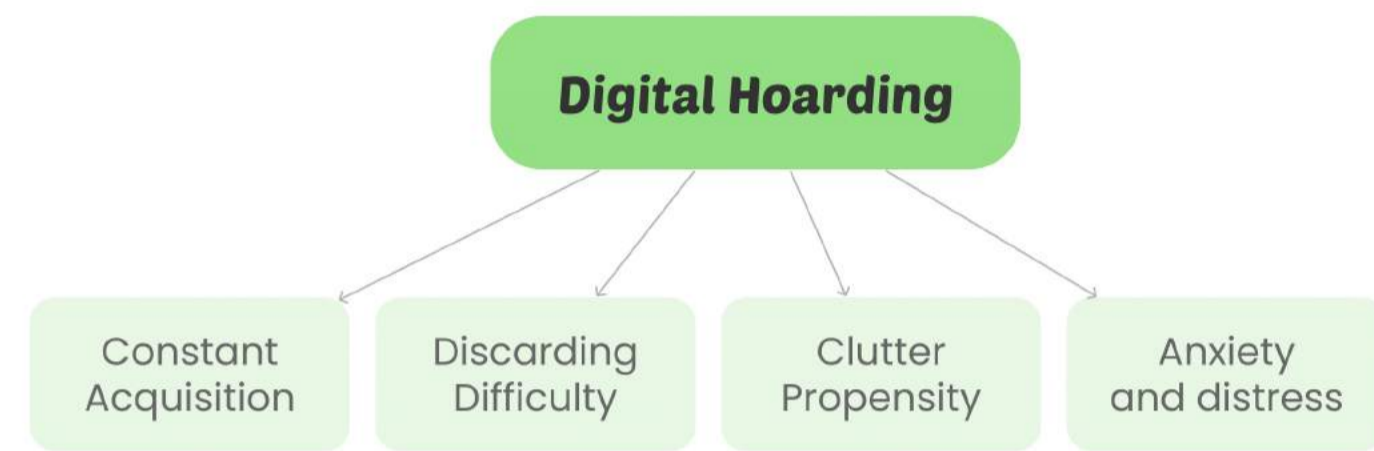


# Using Augmented Reality to Intervene in Digital Hoarding Behaviour

The type of product: AR game  
Name: Qiong Huang

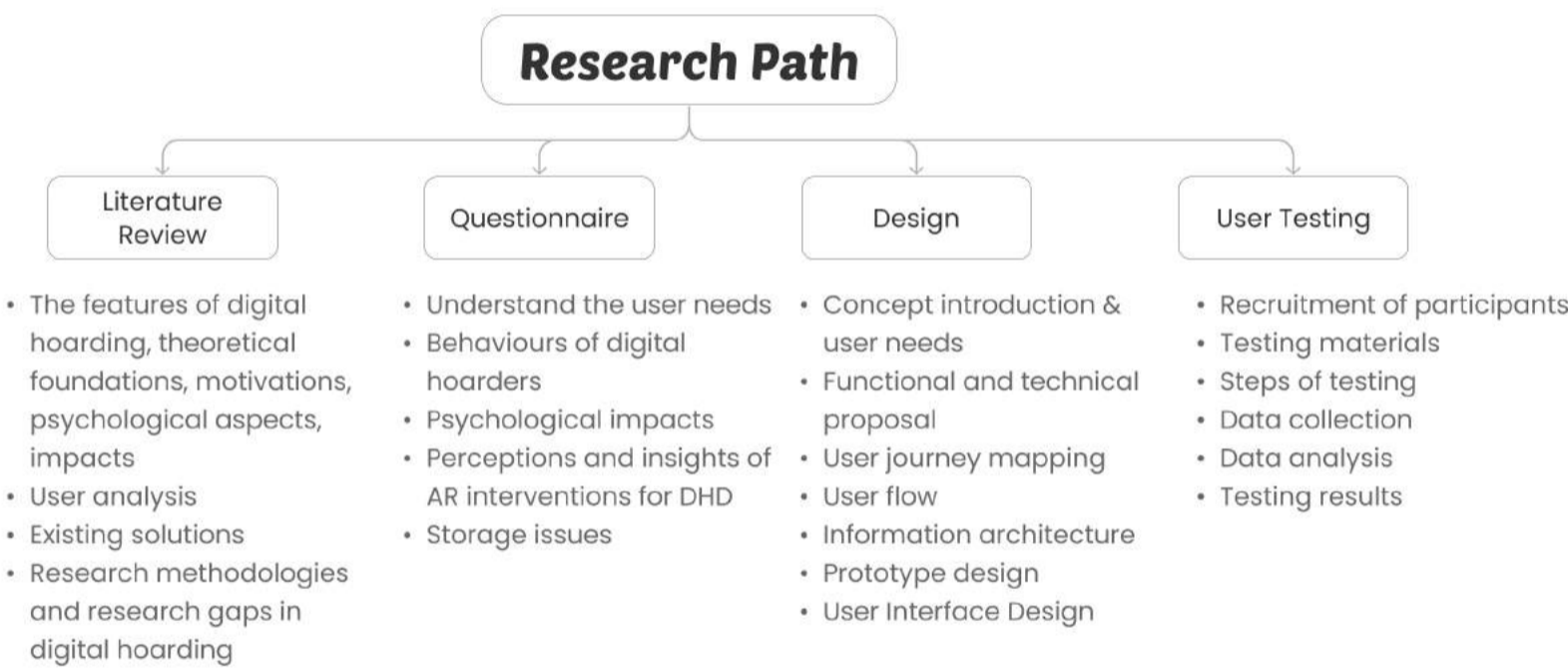
## Introduction

Digital hoarding is the accumulation of digital files (documents, emails, videos, photos, etc.) to the point of loss of perspective, which leads to stress and disorganization, it has a negative impact on daily life. This study focuses on the effectiveness of AR technology to intervene in DHD, develop people's digital organisation habits and improve their productivity and well-being.



## Study Methodology

This study used the literature review, questionnaire, design, and user-testing research methods for this study.



## Research Results

I analyzed the features of DHD, existing solutions, summarized researchers' experiences, theoretical foundation and research gaps to ensure AR interventions' effectiveness in addressing DHD.

### Literature Review

- There is no specific medication for hoarding, **long-term CBT therapies** with digital hoarding, and **VR therapies** are more effective than traditional therapies.

### Questionnaire

- People usually collect the most emails, photos and videos.
- The user needs to develop the habit of organising their digital assets and reduce the anxiety of difficult deletions.
- 65% of participants strongly agreed with the idea that AR technology could help them visualise and organise their digital assets more effectively.

### Design

- I created the AR Game App to help them develop the habit of organising their digital assets, and improve deletion difficulties and anxiety.
- Function 1 is the AI expert interview, function 2 is the collecting, organising and sorting virtual digital files in the AR game
- Function 3 is recording and reminding, and function 4 is organise learning videos

### User Testing

- All participants complete the AR game's tasks very effectively and efficiently with a high level of satisfaction.
- 11 of the participants (73.7%) found the AR game helpful in allowing them to learn to organise and categorise digital information, and 5 participants said that the intervention would be more helpful if they were encouraged to use the game on the daily life.

## Testing & Evaluation

This test is to examine the effectiveness of an AR game intervention for digital hoarding behaviours with 15 participants. These participants could complete the game tasks very effectively and efficiently with the high satisfaction.

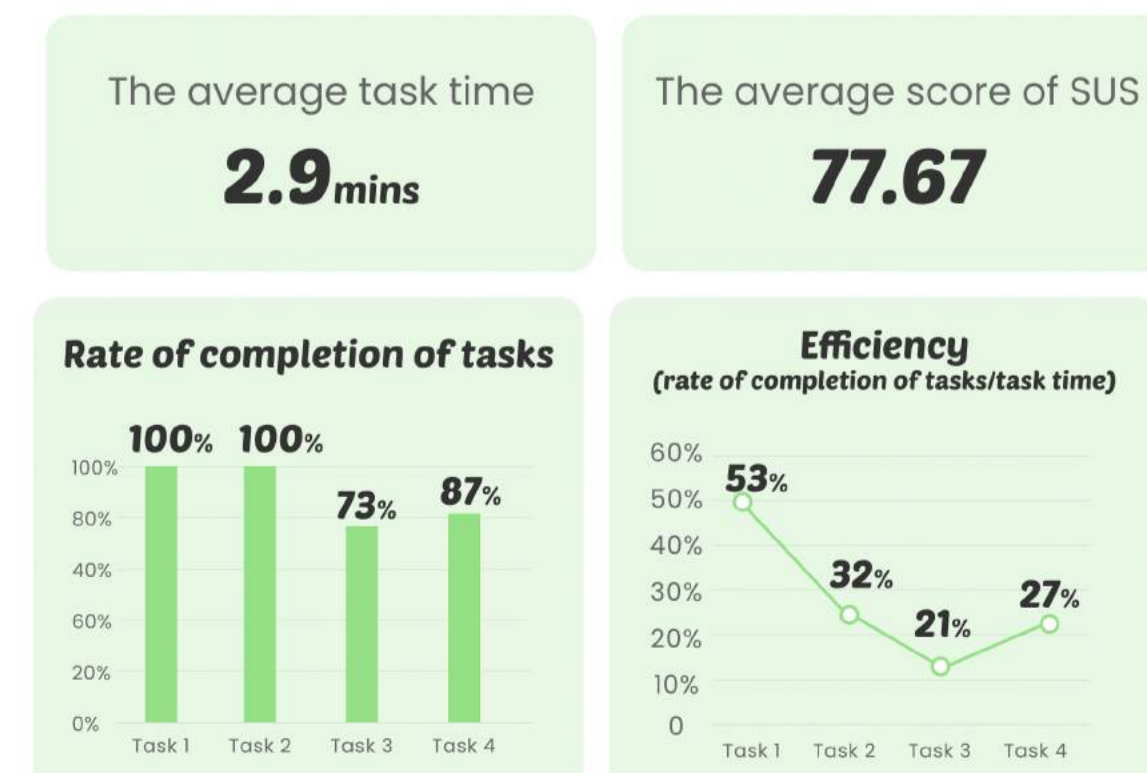
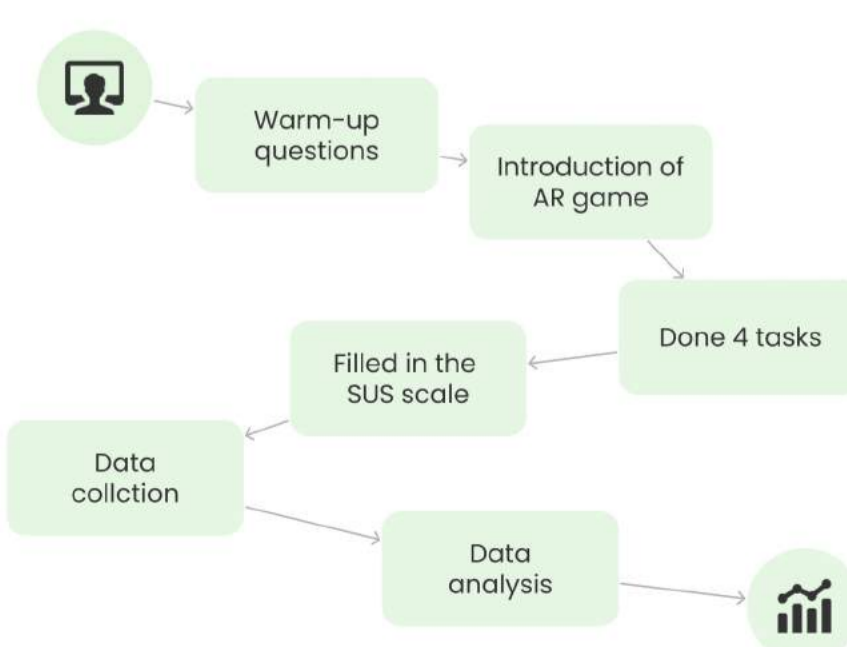
### Testing Tasks

- Sign up and log in
- Interviews with AI experts
- AR games - collecting, organising and sorting virtual digital files
- watching some videos to learn how to categorise

### Testing metrics

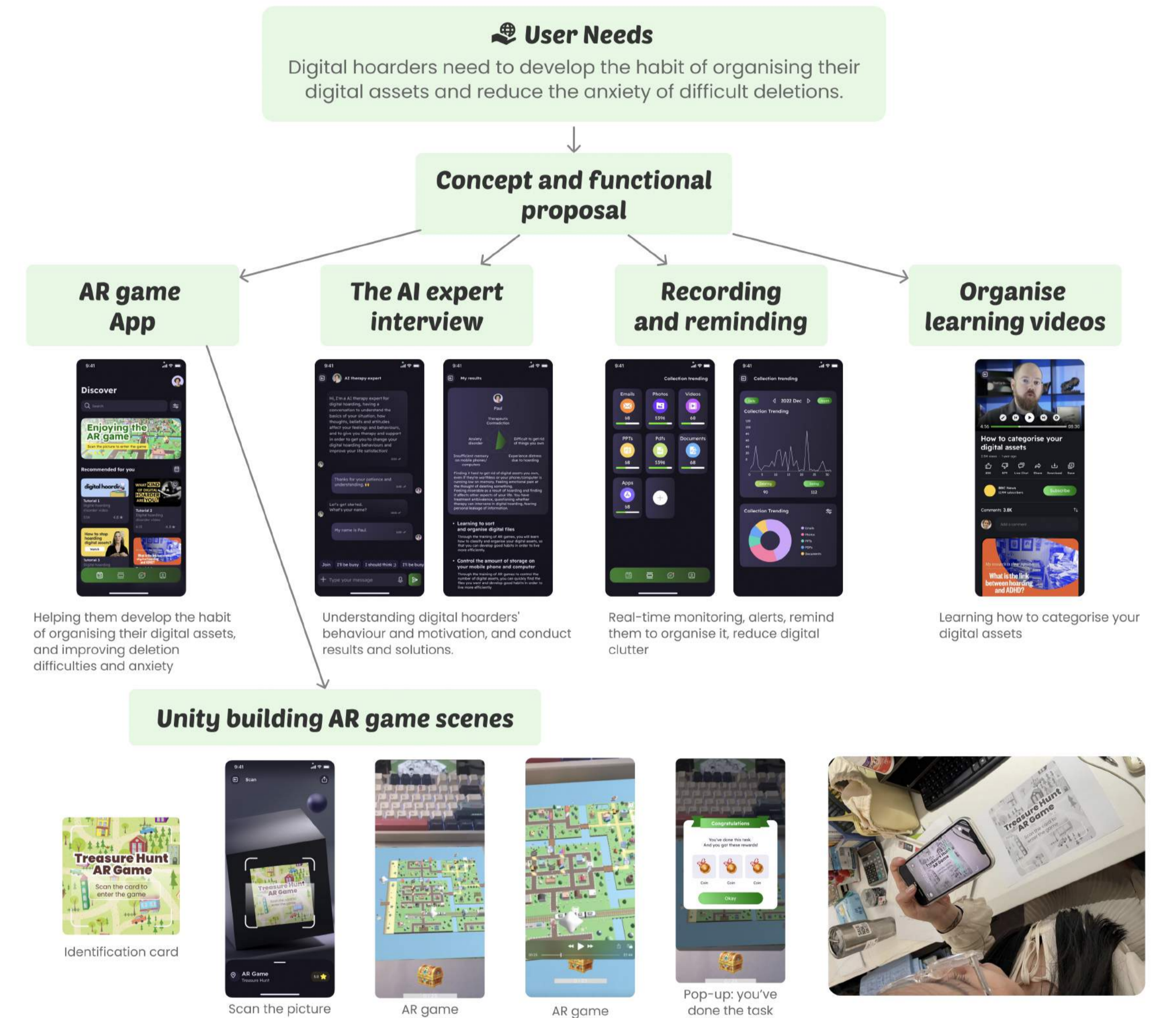
- Task completion rate, task time
- Efficiency
- SUS score-satisfaction rate

### Testing process



## Design

My concept is to provide an AR game App for digital hoarders to help them develop the habit of organising their digital assets, improve deletion difficulties and anxiety, and increase their life satisfaction and productivity.



## Conclusions & Future Work

### Conclusion

The AR game offers a promising intervention approach for digital hoarding behaviors. Participants quickly understood its real-time guidance and independently completed therapeutic tasks, showing comfort and confidence. The AR game App can potentially address mild to moderate digital hoarding behaviors alongside medical practices. Existing studies on hoarders and digital hoarders have primarily been observational for 6 months or more, which limits sample size and long-term effect observation.

### In the future

- Future research will consider the use of AR technology to intervene in digital hoarding behaviours at work
- And explore the use of AR games with different age groups and types of learners (including learners with special needs), and investigate the effects of AR games on motivation, positive impact.