

# What are the benefits of using robotic assistance in job interviews as reported by HR professionals

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## ABSTRACT

*HR professionals are always looking for new ways to improve hiring processes and find the best candidates while reducing biases and inefficiencies in traditional methods. This study investigates the benefits of using robotic tools in job interviews, focusing on their potential to provide objective and efficient evaluations. Despite the growing interest in robotic tools, evidence on their impact is limited. Using the Technology Acceptance Model (TAM), this research gathers insights from HR professionals directly involved in recruitment. Initially, there was skepticism about robotic tools, but after demonstrations, many recognized their potential, especially for positions with lower responsibility. Key themes include the importance of maintaining a human element in interviews, particularly for higher-ranked positions, and the ability of robots to minimize biases and support decision-making.*

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## Keywords

HR professional, Social robots, Job interviews, Hiring process, Technology Acceptance Model

# 1. INTRODUCTION

Hr. professionals are constantly looking for creative methods to ease up their hiring process and procedures and find the best candidates for the right positions. However, biases and inefficiencies are not uncommon in traditional ways of evaluating candidates (Woods et al., 2019). One possible way to improve this situation by improving the precision and effectiveness of applicant selection is through the use of robotic tools in the recruitment process (Biliavska et al., 2022). The options it gives that look very promising for us are, for example, objectivity. Unlike human evaluators who may be influenced by personal biases or emotions, robotic tools can provide an objective assessment of candidate skills based on criteria. This helps ensure fairness and equity in the recruitment process, regardless of factors such as gender, race, or age. Then the next part to improve is efficiency. Robotic tools can automate tasks that require repetition on a large-scale, such as initial candidate interviews. The benefits of using robotic tools could be more opportunities to interview not bonded by time or location thereby saving time and resources. By delegating these tasks to a social robot Hr. professionals could have more time to think about strategies and new implementations they want to use in the future while one of the most time-consuming tasks of their work (Lufkin, 2022) is done by robotic tools enabling organizations to scale their recruitment efforts more effectively when dealing with large volumes. These robots can process a higher number of applicants at the same time. (Martinsson, 2023)

That's the reason we produced the research question *What are the benefits of using robotic assistance in job interviews as reported by HR Professionals?*. Evidence regarding robotic tools and their influence is still sparse despite the growth in interest in their use in recruiting (Hunkenschroer & Luetge, 2022). To address this problem, this thesis aims to conduct interviews among HR professionals engaging in the sector of talent acquisition. By capturing the insights and perspectives of these individuals from the work field directly involved in recruitment activities this study seeks to provide the potential benefits and challenges associated with the implementation of robotic tools in the interview stage of a hiring process. This research will contribute to the future of hiring robots by providing insights formed in the experience of HR. professionals. Using interview data with the technology acceptance model "*Technology Acceptance Model (TAM) is a theoretical model that explains how users come to accept and use technology. TAM is one of the most influential models in the field of information systems and has been widely used to predict and explain user adoption of new technologies.*" (Ursavaş, 2022) and studies. Using interview data from professionals and linking it to the Technology Acceptance Model (TAM) and related studies offers valuable insights into improving the accuracy of candidate interviews. By identifying practical implications and recommendations based on these findings, this study tries to inform strategic decision-making and show the thought processes of HR professionals. This will help organizations enhance their recruitment strategies through the digital transformation of HR management (Chuang & Graham, 2018).

Organizations are seeking efficient methods to conduct fair and unbiased interviews while conserving resources (Mirowska & Mesnet, 2021). However, HR managers have mixed feelings about the introduction of robotic assistance in job interviews

according to (Mohamed et al., 2022). Some studies show ethical concerns and emphasize the importance of the candidate's experience. There is an urgent need to identify and select the most beneficial capabilities of robotic tools for HR managers to use in strategic decision-making. Therefore, this study aims to explore the perceived benefits and concerns of using robotic assistance in job interviews as reported by HR managers. It seeks to show how these professionals perceive the new options and to showcase the benefits these robots can bring to HR professionals. These tools can help lower their workload, provide more reliable information, and enable them to work faster and more efficiently. By the use of these data analytics, HR managers can make more informed and evidence-based decisions regarding candidate selection, performance prediction, and talent acquisition strategies. The acceptance of these opportunities by a company's CEO and the company's digital maturity are linked, potentially improving business outcomes if implemented correctly (Šimek & Šperka, 2019; Uppal et al., 2024).

The research conducted will highlight HR professionals' views on hiring robots by providing insights into their experiences. This research outlines the problem statement regarding job interviews, the study's objectives, and the potential contributions to shaping the future of hiring robots and their benefits for HR professionals (Hunkenschroer & Luetge, 2022).

## 2 Literature review

### 2.1 Definitions and conceptual framework

Social robots are robots designed to interact with humans in social interactions. (Breazeal et al., 2008)

These robots typically exhibit human-like behaviors, such as making eye contact. Recognizing speech and responding to emotions characteristics that define a social robot is the ability to understand and interpret the emotions of a human. (Onyeulo & Gandhi, 2020). These robots are set to help in the interview stage of the hiring process and the interview stage due to their skills to read the emotions of humans and have a real hard-felt conversation.

They can serve a variety of functions including companionship for the elderly or individuals with disabilities educational aids for children, and customer service representatives in retail or hospitality settings. Overall social robots aim to represent a promising area of technological innovation with potential applications in various domains, offering opportunities to enhance the interactions. (Worth, 2024)

Between humans and machines. Support the missing social aspects in robots from now on and improve the quality of work of the people who are working with them. In this research, we will highlight their emotional and communication side to research their skills during job interviews.

These skills are best shown during behavioral interviews. This form of interview focuses on testing behavior in the past to try to predict the future responses of the candidate in certain situations or business cases. Questions in this interview style often start with phrases like "tell me about the time when" or "give me an example of" (Heller et al., 1982)

Throughout the interview stage, both the employer and candidate can evaluate each other for the employer the previously named criteria, and for the candidate the job role, company culture salary, and growth opportunities. Social robots are used to help

HR professionals with job interviews and reduce issues like unconscious bias. Even with efforts to promote diversity, HR professionals can still be influenced by hidden biases—unconscious attitudes or stereotypes that affect their decisions. Social robots can help by conducting interviews consistently, asking the same questions and giving the same responses to all candidates. This helps reduce bias by ensuring that each candidate is evaluated based on the same criteria. Also, Social robots can collect and analyze data from interviews to identify patterns or trends, helping organizations detect and address any potential sources of bias in their hiring processes (Trainer et al., 2020) another problem that HR professionals face is accessing cultural fit assessing cultural fit is finding out if the candidate has the same mentality as the firm and its associates and work style are compatible with the company’s cultural environment this assessment helps not only that the candidate has the right skills but also fits well in the existing team dynamics. (*The Oxford Handbook of Cognitive Sociology*, n.d.) to better understand all these benefits that the robotic assistance gives the Technology acceptance model (TAM) could provide a theoretical framework for understanding the benefits of using robotic assistance in job interviews as reported by HR professionals.

## 2.2 Technology Acceptance Model

The Technology Acceptance Model (TAM) is a theoretical framework commonly used to understand the acceptance and adopt influence (*APA PsycNet*, n.d.) shows the introduction by Fred Davis in the late 80s and has been widely used in numerous fields including information systems, marketing, and psychology. Tam suggests that the intention to use technology is primarily influenced by key factors first one is *perceived usefulness* which refers to the individual belief that using the technology will enhance their performance and productivity in succeeding in specific goals if a person perceives technology as useful it more likely to be used so to make sure that HR professionals use robots in the future. They should believe that the technology will improve their work and lower their workload without losing their quality. The equally as important part is the *perceived ease of use*. This is the part of the factor that shows how free of effort a technological change must be to be considered. So mainly making a process more efficient without costing labor. Having the goal of making the process easier and less labor and time-consuming. These two come together in the attitude part of the framework. *Attitude* is the part of the framework where the person decides to implement the new technology. This decision is personal preference combined with perceived ease of use and perceived usefulness and the degree the person making the decision values most of these two. Lastly, before a person uses a technology, they will go through the behavioral intention part of the framework. This is the place where the degree of the plans a person does or does not have to use technology in the future. Will be named. This part is influenced by all three previously named parts. It's very simple if a person does not have the plan to use it, he has less interest in acquiring it or doing research on it. That's why this framework is so important in this thesis. It shows the thinking process of the HR professionals and the reasons behind their decisions. Towards robots in the recruitment process. Overall, TAM offers a framework for understanding the factors that influence the acceptance and adoption of modern technologies, making it a valuable tool for research on the use of robotic assistance in job interviews for example.

By analyzing the responses through TAM, we can categorize the benefits reported by HR professionals into themes related to usefulness and ease of use. This structured approach allows you

to systematically assess how robotic assistance is perceived and what specific advantages it offers. In conclusion, TAM helps us identify and understand the advantages of using robotic assistance as perceived by HR professionals, offering insights into how these tools can help a HR professional in the future and how to better integrated them into HR practices. This leads to a clear, evidence-based understanding of the benefits of robotic assistance in job interviews, enabling more informed and strategic decisions in HR management.

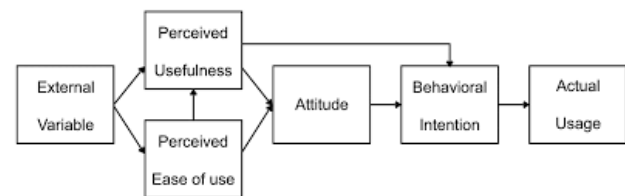


Figure 1: Technology Acceptance Model

Scalability refers to the ability of a process to handle a growing workload without losing on performance or quality. In the case of robotic assistance it enables HR professionals to efficiently manage larger volumes of candidates. While ensuring the hiring process stays as effective as it was before. Despite the large volume of candidates robotic assistance can provide a seamless and personal experience for a applicant. Automated communication informs candidates every step of the process reducing wait times.

## 2.3 Tech Assistance In The Interview Stage

There are several forms of robotic assistance interviews that an HR professional can use during the interview stage for example the recruitment chatbot also referred to as an HR chatbot or job bot an AI (Artificial Intelligence) driven conversational tool crafted to optimize and improve the various parts of the recruitment process. These chatbots have the power of natural language processing and machine learning algorithms to engage with job seekers, hiring managers, and HR personnel through interactive conversations. (Nawaz & Gomes, 2020)

The second one is the interviewing bot. These are AI-driven solutions engineered to streamline the interview process for both candidates and hiring managers. Using machine learning algorithms, these bots administer structured interviews with job seekers through text or voice-based interactions. (Kusumasari, n.d.) and then lastly there are the Video interviewing platforms these platforms. Use the AI algorithms to assess candidates' facial expressions. Their body language and speech in video interviews. By doing that they offer the recruiter valuable information about the candidate's suitability, facilitating a smoother interview process through the option for unsynchronized interviews. (Heiselberg & Stępińska, 2022)

## 2.4 Robotic efficacy

Improved efficiency Robotic assistance in job interviews can help guide the process. By automating routine tasks, such as scheduling interviews, sending reminders, and organizing candidate data. This automation saves time and effort for HR professionals, allowing them to focus on higher-value activities such as assessing candidate fit and engaging with candidates, they can also do pre-qualification to help the HR professional identify high potentials more quickly, also it will make. Reduced

bias possible Robotic assistance can help standardize the interview process helping to mitigate the previously explained unconscious bias. By making sure that all the candidates are being evaluated using the same criteria and in a consistent manner. This consistency will lower the potential for subjective judgment based on factors like age, gender, race, and appearance by removing biases. The robotic tools promote fairness and equity in candidate evaluation aiming for more inclusive hiring decisions. (Nørskov et al., 2022)

## 3 METHODOLOGY

### 3.1 Research design

This study aims to explore the possible benefits and challenges of using robotic assistance in job interviews from the point of view of HR managers. Qualitative research allows in-depth exploration of participants' perceptions and attitudes, essential for understanding complex things such as robotic technologies in HR practices. (Hammerberg & Kirkman, 2016) Using the information from research papers and studies done before, the research aims to find answers to the research question. Semi-structured interviews will be used as the primary data collection method. Semi-structured interviews offer flexibility while providing a framework for exploring topics related to the initial question. (Magaldi & Berler, 2020b) The approach makes sure that the candidates. can express their feelings and aren't bound to only the preset questions which can be found in the appendix HR professionals from a variety of industries and organizations will be recruited as participants for the study. A purposive sampling approach will be used to diversify in terms of organizational size and sector. Participants will be selected based on their experience and involvement in the recruitment process within their organizations. The qualification needed to be part of this research is having a profession that is able to make changes in the HR of a company and that grants someone to be called a professional in the field of HR

### 3.2 Data Collection Procedure

Semi-structured interviews with HR professionals will take place over the phone, through video conference, or in person, based on the preferences of the participants and practical issues. Interviews will be analyzed after being audio recorded with participants' permission. Then the questions will be asked to them in case some of the interviewees were not familiar with the concept of social robots. They were shown a video listed as video one in the appendix. To get familiar with the concept and their capabilities. After that we continued the interview. Then worked out in a clear overview that states their opinions the semi-structured will be named by person IV1-7 to ensure no bias. The interviews will be guided by a preset interview guide which will be added in the appendix part of this thesis also their identities will be exposed if given permission by the candidates themselves all interviews will be recorded and transcribed and added to the appendix.

HR professionals are individuals who have the competency of being a credible activist stands out as paramount of HR professionals in getting personal effectiveness. Who tailors his or her approach to doing business based on the stakeholders they

serve Whether they engage with internal or external forms of stakeholders. The competencies they require may vary, ranging from being a Strategic positioner or being a compliance manager ensuring effective collaboration and alignment with diverse stakeholders' needs. Ulrich et al. (2017) these are the qualifications all the participants need to match before being selected for this research The research will include Headhunters a recruiter refers to an executive recruiter or search consultant he or she is a professional hired by organizations to attract top-tier talent for specialized or senior-level positions. Using their big networks and deep industry insights, they search for and engage qualified candidates who might not be actively looking for a job. Headhunters are in executive search aiding organizations in securing individuals possessing the requisite skills (Tallerico, 2000) the headhunters to be interviewed will range age (20-60) from junior to senior level. The semi-structured approach is commonly employed in the social sciences and clinical settings for qualitative research and data collection. Although it typically follows a predefined guideline or protocol centered around a core topic, it also gives room for exploration and findings. (Magaldi & Berler, 2020c) Flexibility allows the conversation to follow various steps as it progresses. Magaldi and Berler (2020) all these questions will be going over their opinions (see appendix 3) Social robots: are robots designed to interact with humans in social interactions. These robots typically show human-like behavior for example, "making eye contact, recognizing speech, and responding to emotions characteristics that define a social robot are the ability to understand and interpret the emotions of a human being (Onyeulo & Gandhi, 2020)

### 3.3 Data Reduction And Data Analysis

In order to ensure that all answers were captured correctly, interviews were recorded and transcribed. To make sense of the data gathered from the interviews and identify the forces underlying incumbents will be coded with the use of coding unstructured data. This can be divided in categories as to be seen in the file in the appendix (Atlas.ti, 2020) for the coding a a deductive method will be used. A *deductive method* will be used to categories and then link it to them but due to the nature of semi-structured interviews its very reasonable to assume that the use of inductive coding will be necessary to ensure the fact that that also things that aren't written in code can be used (Atlas.ti, 2020) we generally used a deductive method this thesis to generalize the outcomes and get a representative result. This table shows how all the connections between the answers and the Tam model.

### 3.4 Data analysis

As the interviews were conducted and the recordings were analyzed and transcribed, they were matched to ensure that the statements of the participants were all quoted the right way. During the coding process, we made use of the software of Atlas .ti (Stewart, 2024 ) a software that is specially designed for qualitative data analysis the transcripts have undergone several coding stages. Which helped create a simpler and easier to understand data structure. This was done by following a part of the ground principles of "The Inferential Process in Developing a Data Structure" developed by Magnani and Gioia (2023). We used their data structure the codes were structured from the TAM model the After coding the data was put in Excel where it was structured. To show the associations between first order

second order concepts and aggregated dimensions several external elements were identified and recorded as they were considered crucial details from the interviews. These elements will be discussed and presented later in the report, along with their connections to the main topic of this research look ad chart one in the appendix.

## 4. RESULTS

This part discusses the results that were obtained during the interviews. The aim of conducting interviews with HR professionals was. To get their opinions on certain scenarios in the future and the present regarding the use of social robots in the job interview stage of the hiring process the results will be discussed by the categories assigned to them. The statements made by the participants will be called (IV1-IV8) of the interviewees regarding their statements.

Number#	Age/gender	JOB	Industry
Iv1	53/F	Business partner	Executive search
IV2	21/M	Recruiter	Executive search
IV3	60/F	Hr Manager Global	Laundry
IV4	39/F	Hr Manager	Construction
IV5	28/M	Hr business partner	Construction materials
IV6	52/M	Region manager	Gambling
Iv 7	28/M	Team leader	Health Care
IV8	Has redrawn his statements	Work related conflict doesn't want to participate	

Figure 2: The list with all interviewees

### 4.1 Perceived usefulness

“Perceived usefulness (PU) in the Technology Acceptance Model (TAM) is how much a person believes a technology will enhance their job performance.” (He et al., 2018)  
 PU is shaped by job relevance, output quality, and result demonstrability, which show how applicable and effective the technology is. Ease of use indirectly influences PU, making integration smoother. Social influence, previous experience, training, and continuous support also impact PU. For HR professionals, these factors determine the perceived benefits of robotic assistance in job interviews, leading to better acceptance and use of such technologies.

Many interviewees were very skeptical at first but when they were shown a video of a social robot as linked in the appendix and its use they often concluded that it would help them in the long run but all said only on positions with a low form of responsibility, for example, production employees as was reported by (IV1,IV3,IV5) and (IV8) so they see the benefits of the robot but not on all the branches of the HR spectrum they focus the use of the Social robot mainly and only on low

responsible employees Preferences and feelings these are the interviewees, of course, Anonymous due to privacy reasons

### 4.1.1 When to use

The most common theme that recurred during the interview was that the experts didn't want to fully take away the human side of job interviews especially in higher ranked positions with higher forms of responsibility as been said by (IV1,2,3,4,6) They rather work together as seen in a statement of (IV1) “ *I said, if you're a company that has an excellent recruiter, I think they will be happy to have a computer who is conducting the interview together with a human.*” This serves as a way for them to verify their own work, ensuring that nothing has been overlooked or any mistakes made, providing reassurance of their thoroughness. One of the most important parts why the interviewees think it useful is to minimize the biases that occur during hiring processes as been stated “*Yes, but well, then you do have a proof to be able to demonstrate look, we may not be very diverse, but that's because that's the most effective for this company. And if you don't have that or are less able to demonstrate it, then you will very quickly perhaps get a comment*” With the assistance of robots, HR professionals aim to justify their hiring decisions, minimizing the risk of bias claims. These robots provide objective assessments that can proof the HR professionals' choices. This approach also enables HR professionals to compare their own evaluations with those of the robots, ensuring alignment and consistency. By comparing their decisions with the robot's impartial assessments, they can demonstrate a fair and transparent selection process. This not only enhances the trustworthiness of their hiring practices but also reinforces confidence in their decision-making, ensuring that the best candidates are chosen based on merit.

### 4.1.2 Willingness to use

Most of the interviewees want to implement these robots in the future in their respective companies. But the resistance to why they haven't acted on that yet is. They don't want to take the early adaptor risk an early adaptor is a person who uses a technology before the bigger public does the reason, they choose for this varies among them. (IV1,2,3) “*because the business is currently too small for that*”. Mostly the answer is according to (IV4,5,7) that they first want all the bugs and problems fixed and let someone else test it if it works fully and is profitable, they will act too but till then they rather stick to what they know and trust. “ *I would wait with implementing things like Robots until is proven all the child sickness is out of the project and they are thrust worthy and profitable*” (IV5, IV6) mentioned that he only wants to use robots in his sector when a human is also present due to the high level of trust required in his field. He prefers to meet people personally and stated, “*I think it might be an improvement if you put such a robot next to me. Because it will notice certain emotions earlier than I do. So, in combination with that, I can see a possibility of using it in the future, but not on its own.*” On the other hand, (IV2) sees the potential for robots to ease their workload by handling tasks such as relationship management within the company, writing function profiles, creating documents, and similar activities. By utilizing robots for these tasks, they can reduce their efforts in these areas and focus more on tasks that require their personal attention  
 Adding to that (IV1) and (IV3) mentioned that the concept of biases could also be mitigated due to the uses of social robots. By using them they could always check if the decision for this person was due to bias or due to lack of skill of the candidate.

### 4.1.3 High volume of interviews

The volume in which a robot can do these interviews without being bound to working hours or salary caps is a huge benefit in the eyes of the interviewees. They all said except (IV7) that robots can be very useful in places where a lot of people are needed with low qualifications, they need to be healthy and motivated, but these interviews take up a lot of time according to (Martinson, 2023). They said they would rather let a robot do these interviews in the future. To let them focus on things that they don't trust the robot with such as interviews of positions that have a lot of responsibility as stated by (IV1) "can be used on a *Huge scale, because you can think about the Uvw who helps reintegrating people in the job market. But another example is, logistics firms. they have the same part one thing, but they need to turn these within a short time. I think it makes sense in those areas*"

## 4.2 Perceived ease of use

*"Perceived ease of use is defined as the degree to which an individual believes that using a particular technology would be free from effort. As an individual's perceived ease of use of using a given technology increases, their intentions to use the technology also increase. Perceived ease of use is also commonly assessed with a questionnaire. An example is shown here"* (Worthington, 2021)

### 4.2.1 Technical Proficiency and Comfort

Most of the interviewees claim to have been recently introduced to the new world of AI and robots. So they seek the knowledge to understand what these machines can bring and help them with. They are cautious and curious they see the opportunities it can bring them but lack the knowledge to act on them as stated by (IV3) "Next Wednesday we just have a training about it. I don't even know what's possible and I don't know how at all it works but I'm eager to learn"

They claim that it first must be proven to them that these innovations are as enriching as they are claimed to be and that they can understand them to fairly judge them if they are sources in their industry. So for them, the most important points are Ease of use and Employee satisfaction as claimed by (IV2), (IV4) and (IV7) "Only customer satisfaction. And result-oriented. " "Yes, I think, so actually what I understand very much is that the biggest sticking points, what you see in this, are the usage level. Yes, the impersonality. Usage level and impersonality, Yes,".

### 4.2.2 Adaption to work with robots

In this part the opinions vary a lot. (IV1,2,5,6) said that it was easy to adapt and the biggest motivation for HR professionals is "as soon as they realize that it will bring efficiency and it will bring quality, they will adapt." according to (IV1). On the opposite side of this. there are professionals that fear when they adapt to this change that there is a chance that they will lose the personal aspect of a job interview. These phenomena should be avoided according to them (IV3,IV4) "My heart is with just going and engaging in conversations with people and things like that more. But if others build something for me that I can work in, totally fat fine" "Only that for everything, though, we should not fly off the human scale." So basically, they all think this is the future but the one are way opener to these adaptations than

others. Who are more cautious for this future. Even if this takes a lot of work of their hands

### 4.2.3 Workload reduction

Next to that a main point of attention is the lowering of workload if the system is proven to work. Due to the fact that the interviews of low responsible functions can be handed over to the robot and in large production firms this is a workload to be reduced with according to (IV3) and (IV4) who work in this field. As stated by (IV3) "Yes, that would help such a system then. Workload reduction, that gives you more insights. That gives you more insights, so you spend less time"

The workload will lower but of course the findings of these robots need to be checked so its not pure benefit but if calculating a time gain against a time loss there will be a positive outcome in time gained.

## 4.3 Attitude

The attitude among the candidates for the interviews for the research varies a lot but they have all in common that they don't want to hand it all over to the robots. Some are more excited and willing to adapt to new possibilities with robots in the hiring process especially in the job interview stage but. Not one of them asked 7 interviewees was willing to let that stage fully go to only robots (IV7) has the most hesitance but that's because of his industry in which the Human should be a central figure, so he was very hesitant about the implementation of these robots in his sector. Most see it as a helpline, not a substitute as shown in IV2 "it could be used as a helpline in the future. I also currently use it as a helpline" The reoccurring attitude that was found during this research is that the candidates are open to trying it but don't want to be early adaptors but still perceive positive outcomes if used in the right way. This is the way, it suits their industry and is easy to use as being free of all kinds of initial problems which they could be held liable for or scare potential new employees away with. Most of them 1,2,4,7 really like the fact that they have a so-called backup to check what they have missed themselves. During the interview, they conducted and had a partner with a different view without needing the use of an extra HR partner that would cost them time and money. As long as their main focus on "The biggest sticking points, what you see in this, is the usage level. Yeah, the impersonality. Usage level and impersonality" are covered they are open to be introduced or already using Robotic assistance during the job interviews except from IV6,7 Who for The reasons thrust of candidates and lack of human contact is not something they would immediately implement in their firms. "We do have a large amount of money involved. I just want to look someone in the eye before I trust someone. As you explained to me. I think it might be an improvement if you put such a robot next to it. Because it will notice certain emotions and so on earlier than I do. So in combination with I can see a possibility of that in the future"

## 4.4 Behavioral intentions

The opinion of the candidates is that if the use of robots during interviews is done on jobs that have a higher responsibility, then the robot should do the interview together with a human to get a

more complete profile of the candidate and a better impression of the skills and personality of the candidate as stated by (IV1) on the question how she would see a working environment with a robot: *“I didn't do that right now, but maybe for the future, we try to compare the robot with the human being. So, you have a more complete view of the candidates. That, to my opinion, is possible. But leave it completely up to the interview level. I don't think that's a good idea.”* as now often addressed all the HR professionals don't find it a good idea to give the whole interview stage to the robot but some don't exclude potential future collaborations with them.

## 5. DISCUSSION

This section discusses the results obtained from the interviews conducted with HR professionals according to their opinions on the use of social robots in the job interview stage of the hiring process. The findings will be discussed according to the categories assigned to them. The statements made by the participants will be referred to as (IV1-IV8).

### 5.1 Perceived usefulness

*“Perceived usefulness refers to how strongly an individual believes that utilizing a specific system or technology will improve their job performance or overall effectiveness. This idea is essential for comprehending how users accept and adopt new technologies or systems”* (Karahanna & Straub, 1999) Many of the people interviewed showed skepticism about the use of social robots. However, after viewing a demonstration video (linked in the appendix), they acknowledged that robots could be useful in the long term, especially for positions where lower responsibility levels are demanded, for example, production employees (IV1, IV3, 5, 8). Even when recognizing the positive effects they emphasized that robots should be primarily be used for roles with less responsibility within HR this is in line with the findings of Chuang and Graham (2018), who noted how important it is to integrate technology in a way that supports humans and does not replace them.

#### 5.1.1 When to Use

A recurring theme was the hesitation to completely remove the human element from job interviews, particularly for higher-ranked positions with greater responsibility (IV1, IV2, IV3, IV4, IV6). For instance, IV1 stated, *“I think they will be happy to have a computer interviewing a human.”* This approach allows HR professionals to check their work, ensuring nothing is overlooked and providing reassurance of their verdicts. Robots can help minimize biases in hiring, as they provide objective assessments that support HR decisions. This ensures a fair and transparent selection process, enhancing the trustworthiness of hiring practices and reinforcing confidence in decision-making. This is supported by Hunkenschroer and Luetge (2022), who discuss the ethical need for transparency and fairness in AI-driven recruitment processes.

#### 5.1.2 Willingness to Use

Most interviewees expressed a desire to implement robots in the future, but they hesitate to be early adopters due to the perceived risks. Reasons for this hesitation varied: some felt their business was currently too small (IV1, IV2, IV3), while others preferred to wait until all potential issues had been resolved (IV4, IV5, IV7). IV6 mentioned that he would only use robots in his sector

if a human were also present, due to the high level of trust required in his field. On the other hand, IV2 saw potential in using robots for tasks such as relationship management, writing function profiles, and creating documents, allowing HR professionals to focus on more important tasks. This reflects the findings of Biliavska (n.d.), who indicated that AI can enhance HR practices by reducing biases and improving decision-making processes. IV1 and IV3 noted that using robots could help mitigate biases by providing an objective check on hiring decisions, ensuring they are based on candidate skills rather than unconscious biases.

### 5.1.3 High Volume interviews

all the Interviewees, except (IV7), agreed that robots could be highly useful in handling large volumes of interviews, especially for positions requiring lower qualifications (Martinsson, 2023). For example, (IV1) stated, *“I think it makes sense in those areas where interviews need to be conducted quickly and efficiently.”* Robots can take over these time-consuming tasks, allowing HR professionals to focus on more critical aspects of the hiring process. This is consistent with the research by (Kusumasari et al.) which supports the idea of using AI for routine tasks to free up HR professionals for more strategic roles.

### 5.2 Perceived ease of use

Most interviewees claimed to have limited exposure to AI and robots, expressing a desire to learn more about these technologies. They underline the importance of ease of use and employee satisfaction (IV2, IV4, IV7). (IV3) mentioned, *“Next Wednesday we have a training about it. I don't even know what's possible, but I'm eager to learn.”* They believe these innovations must prove their value and be user-friendly to be fully accepted. This aligns with the observations of Nawaz and Gomes (2020), who highlighted that AI technologies must be intuitive and easy to integrate to gain widespread acceptance.

Opinions varied on adapting to these technologies. (IV1, IV2, IV5, and IV6) felt it would be easy once the benefits were clear, while (IV3 and IV4) feared losing the personal touch in job interviews. (IV3) stated, *“My heart is with engaging in conversations with people. But if others build something for me that I can work with, that's fine.”*

#### 5.2.1 Technical Proficiency and Comfort

Most of the interviewees indicated that they were relatively new to the world of AI and robots, showing both caution and curiosity. They expressed a need for training and hands-on experience to feel comfortable and proficient with these technologies. For example, (IV3) mentioned the need for training to understand how AI can be integrated into their workflow. This is consistent with the findings of Mohamed et al. (2022), who emphasized the importance of training and familiarization with AI technologies to improve efficiency and effectiveness in HR tasks.

#### 5.2.2 Adaptation to Change

Opinions varied on adapting to these technologies. IV1, IV2, IV5, and IV6 felt it would be easy once the benefits were clear, while IV3 and IV4 feared losing the personal touch in job interviews. IV3 stated, *“My heart is with engaging in conversations with people. But if others build something for me that I can work with, that's fine.”* This reflects the mixed attitudes

found in the research by Nørskov et al. (2022), which noted both enthusiasm and skepticism towards AI in HR. The ease of adaptation often hinges on the perceived balance between efficiency gains and the retention of personal interaction.

### 5.2.3 Workload Reduction

Reducing workload was highlighted as a significant advantage, particularly for roles involving low-responsibility tasks in large production firms (IV3, IV4). IV3 stated, “*Workload reduction gives you more insights and saves time.*” Although robots’ findings would need to be verified,” the overall time saved would outweigh the time spent checking the robots’ work. This is in line with the findings of Mohamed et al. (2022), who found that AI could improve efficiency and effectiveness in HR tasks.

### 5.3 Attitude

The interviewee's opinions toward the use of robots in job interviews varied significantly. Some interviewees, such as (IV1), (IV2, IV4, and IV7), were more enthusiastic about the potential benefits of integrating robots into the hiring process. They viewed robots as helpful tools that could enrich their work rather than replace it. For instance, (IV2)(IV4,) who appreciated the idea of having a technological backup to double-check their work without needing an additional HR partner. On the other hand, (IV6 and IV7) expressed more skepticism and hesitation. (IV6)emphasized the importance of human contact and trust, particularly in his field where personal interactions are crucial. He stated, “*We do have a large amount of money involved. I just want to look someone in the eye before I trust someone.*” This cautious approach reflects a broader concern about losing the human touch in the hiring process, a sentiment also noted in Nørskov et al. (2022), which found both enthusiasm and skepticism toward AI in HR. Overall, while the majority of interviewees recognized the potential advantages of using robots, there was a strong opinion on maintaining human oversight and interaction to ensure the personal aspects of the hiring process were not forgotten.

### 5.4 Behavioral Intentions

The behavioral intentions of the interviewees regarding the implementation of robots in job interviews were influenced by several factors. Most interviewees agreed that robots should be used alongside humans for roles with higher responsibility to create a more complete candidate profile. For example, IV1 noted, “*You have a more complete view of the candidates if you compare the robot with the human.*” This hybrid approach was seen as beneficial for combining the strengths of both humans and robots, providing a comprehensive assessment of candidates. Additionally, some interviewees highlighted the potential for future collaborations between humans and robots. They believed that while fully automated interviews were not desirable, integrating robots as support tools could enhance the hiring process. (IV3 and IV5) expressed a willingness to adapt to these changes once the technology had proven its reliability and effectiveness. This aligns with the findings of Šimek and Šperka (2019), who discussed the benefits of human-robot collaboration in HR departments. They emphasized that the acceptance of such technologies would depend on their demonstrated ability to improve efficiency and decision-making without compromising the quality of human interactions.

The interviewees also recognized that adopting robots in job interviews would require overcoming initial resistance and proving the technology's value. IV7, who was the most hesitant,

reflected this cautious optimism by stating, “*I think it might be an improvement if you put such a robot next to it. Because it will notice certain emotions and so on earlier than I do. So in combination with I can see a possibility of that in the future.*” This highlights the importance of gradual implementation and continuous evaluation to ensure the technology meets the needs of HR professionals and enhances their work without replacing the essential human elements of the hiring process.

## 6 Practical Implications

The results of this study have several practical implications for HR professionals and organizations considering the integration of social robots in job interviews. Firstly, the approach of using robots alongside human interviewers can provide a more complete candidate evaluation. By combining the objective data from robots with the soft skills of human interviewers, organizations can improve the success rate and fairness of their hiring processes. This dual approach helps lower the biases and makes sure that every candidate has a fair evaluation of qualifications and suitability for the role. Next to that, the implementation of social robots in lower-responsibility roles can significantly lower the workload for HR professionals. Automating routine and time-consuming tasks such as basic interviews allows HR staff to focus on more strategic and complex aspects of the hiring process. This not only improves efficiency but also allows HR teams to differ their resources more effectively, potentially leading to better hiring outcomes and overall organizational performance. The pilot program that the interviewees have suggested is a trial that can lead to more thrust in the new systems.

## 7 Theoretical Implications

This thesis contributes to the understanding of technology acceptance and adoption of social robots in the context of HR practices, particularly through the view of the Technology Acceptance Model. The findings give body to the importance of perceived usefulness and perceived ease of use in the influence on HR professional's acceptance of social robots. The study shows that job relevance, output quality, and ease of integration are critical factors shaping perceived usefulness. This aligns with existing TAM literature and expands its application to the specific branch of HR technology. In addition to that the study shows the importance of social influence, previous experience, and continuous support in the adoption of new technologies. The mixed attitude towards the use of social robots showcases the ongoing scale between technological advancements and the preservation of human elements in HR practices. This highlights the need for further research into the dynamics of human-robot collaboration, especially in roles requiring high levels of personal interaction and trust. This thesis also suggests that the usefulness of social robots in HR depends on their ability to work with rather than replace human skills. This supports the perspective that technology should enhance human work by providing options to improve efficiency and decision-making without compromising the quality of human interactions. Future research can explore the long-term impacts of human-robot interview models on hiring outcomes, employee satisfaction, and culture within the firm.

## 8 Limitations And Recommendations for Future Research



This thesis has several limitations that should be addressed. The sample size was limited to only people from the Netherlands which may not fully represent the broad industry. With the rapidly evolving nature of AI and robotic technology, the findings may quickly become outdated as new advancements occur. Future research should expand the sample size and include a more diverse range of interviewees to enhance the more general outcome of the results. For future research I would recommend a larger sample size which should be mixed male female. Adding to that preferably from more than one continent all mixed backgrounds of the HR landscape. From the perspective of the person being interviewed it would be helpful to really experience a social robot in real life not just from a film. If a researcher could provide the to be interviewed person with a social robot and let him or her test it in a real life scenario i think the test results would be more specific due to the lack of knowledge about all the capabilities such a robot has.

## 9. Conclusion

This study helps grow the understanding of the literature on robotic assistance in HR by providing insights from HR professionals. It shows the potential benefits robots can have, such as timesaving, efficiency, and reduction of bias, while also formulating concerns regarding ethical considerations and the need for oversight by humans. The optimism expressed by HR professionals is to be taken with caution it suggests. Implementing them needs careful planning and training and a focus on maintaining the human element. By comparing the findings of this study with existing literature this study shows an understanding of the factors that influence the implementation of robotic tools in HR. It offers practical recommendations for their implementation. Everything should be implemented step by step starting with involving roles with lower responsibility. This makes sure that the damage the company has if there are mistakes made is minimal. So-called Pilot programs can gather feedback and make necessary improvements to let this transition go slowly and let employees be able to interfere with any potential problems. That could occur during these pilots to ensure that the HR professionals can counter these so-called child diseases before the use on a brother scale.

## 10 References

- APA PsycNet. (n.d.). <https://psycnet.apa.org/record/2016-45810-001>
- Biliavska, V. (n.d.). Analysis of the impact of artificial intelligence in enhancing the human resource practices. [https://library.acadlore.com/.https://library.acadlore.com/JIMD/2022/1/2/JIMD\\_01\\_02\\_06.pdf](https://library.acadlore.com/.https://library.acadlore.com/JIMD/2022/1/2/JIMD_01_02_06.pdf)
- Breazeal, C., Takanishi, A., & Kobayashi, T. (2008). Social Robots that Interact with People. In Springer eBooks (pp. 1349–1369). [https://doi.org/10.1007/978-3-540-30301-5\\_59](https://doi.org/10.1007/978-3-540-30301-5_59)
- Chuang, S., & Graham, C. M. (2018). Embracing the sobering reality of technological influences on jobs, employment and human resource development. *European Journal of Training and Development*, 42(7/8), 400–416. <https://doi.org/10.1108/ejtd-03-2018-0030>
- Edwards, R., & Holland, J. (2013). What is Qualitative Interviewing? <https://doi.org/10.5040/9781472545244>
- Empirical evaluation of the revised Technology Acceptance Model on JSTOR. (n.d.). [www.jstor.org.https://www.jstor.org/stable/2633017](http://www.jstor.org.https://www.jstor.org/stable/2633017)
- Hammerberg, & Kirkman. (2016, April). Qualitative research methods: when to use them and how to judge them. [https://www.researchgate.net/publication/290432694\\_Qualitative\\_research\\_methods\\_When\\_to\\_use\\_them\\_and\\_how\\_to\\_judge\\_them](https://www.researchgate.net/publication/290432694_Qualitative_research_methods_When_to_use_them_and_how_to_judge_them)
- He, Y., Chen, Q., & Kitkuakul, S. (2018). Regulatory focus and technology acceptance: Perceived ease of use and usefulness as efficacy. *Cogent Business & Management*, 5(1), 1459006. <https://doi.org/10.1080/23311975.2018.1459006>
- Heller, V., Jackson, H., & King, N. J. (1982). Behavioural Job-Interview Skills Programmes: How effective are they? *Australian Social Work*, 35(1), 21–28. <https://doi.org/10.1080/03124078208549719>
- Heiselberg, L., & Stępińska, A. (2022b). Transforming qualitative interviewing techniques for video conferencing platforms. *Digital Journalism*, 11(7), 1353–1364. <https://doi.org/10.1080/21670811.2022.2047083>
- Hunkenschroer, A. L., & Luetge, C. (2022). Ethics of AI-Enabled Recruiting and Selection: A Review and Research agenda. *Journal of Business Ethics* (Print), 178(4), 977–1007. <https://doi.org/10.1007/s10551-022-05049-6>
- Karahanna, E., & Straub, D. W. (1999). The psychological origins of perceived usefulness and ease-of-use. *Information & Management*, 35(4), 237–250. [https://doi.org/10.1016/s0378-7206\(98\)00096-2](https://doi.org/10.1016/s0378-7206(98)00096-2)
- Kusumasari, J. S. S. S. M. a. M. H. T. F. (n.d.). Interview Bot Development with Natural Language Processing and Machine Learning. *IJTech - International Journal of Technology*. <https://ijtech.eng.ui.ac.id/article/view/5018>
- Lufkin, B. (2022, February 25). Why hiring takes so long. <https://www.bbc.com/worklife/article/20211020-why-hiring-takes-so-long>
- Magnani, G., & Gioia, D. (2023). Using the Gioia Methodology in international business and entrepreneurship research. *International Business Review*, 32(2), 102097. <https://doi.org/10.1016/j.ibusrev.2022.102097>
- Magaldi, D., & Berler, M. (2020). Semi-structured interviews. In Springer eBooks (pp. 4825–4830). [https://doi.org/10.1007/978-3-319-24612-3\\_857](https://doi.org/10.1007/978-3-319-24612-3_857)
- Magaldi, D., & Berler, M. (2020b). Semi-structured interviews. In Springer eBooks (pp. 4825–4830). [https://doi.org/10.1007/978-3-319-24612-3\\_857](https://doi.org/10.1007/978-3-319-24612-3_857)
- Magaldi, D., & Berler, M. (2020c). Semi-structured interviews. In Springer eBooks (pp. 4825–4830). [https://doi.org/10.1007/978-3-319-24612-3\\_857](https://doi.org/10.1007/978-3-319-24612-3_857)
- Martinsson, G. (2023, December 19). High volume hiring and the rise of AI interviews | Interviewer.AI. Interviewer.AI. <https://interviewer.ai/high-volume-hiring-ai-interviews/>
- Mirowska, A., & Mesnet, L. (2021b). Preferring the devil you know: Potential applicant reactions to artificial intelligence evaluation of interviews. *Human Resource Management Journal*, 32(2), 364–383. <https://doi.org/10.1111/1748-8583.12393>
- Mohamed, S. A., Mahmoud, M. A., Mahdi, M. N., & Mostafa, S. A. (2022). Improving efficiency and

effectiveness of robotic process automation in human resource management. *Sustainability*, 14(7), 3920. <https://doi.org/10.3390/su14073920>

- Nawaz, N., & Gomes, A. M. (2020). Artificial Intelligence Chatbots are New Recruiters. *Social Science Research Network*. <https://doi.org/10.2139/ssrn.3521915>
- Nørskov, S., Damholdt, M. F., Ulhøi, J. P., Jensen, M. B., Mathiasen, M. K., Ess, C., & Seibt, J. (2022). Employers' and applicants' fairness perceptions in job interviews: using a teleoperated robot as a fair proxy. *Technological Forecasting & Social Change/Technological Forecasting and Social Change*, 179, 121641. <https://doi.org/10.1016/j.techfore.2022.121641>
- Onyeulo, E. B., & Gandhi, V. (2020). What Makes a Social Robot Good at Interacting with Humans? *Information*, 11(1), 43. <https://doi.org/10.3390/info11010043>
- Šimek, D., & Šperka, R. (2019). How Robot/human Orchestration Can Help in an HR Department: A Case Study From a Pilot Implementation. *Organizacija*, 52(3), 204–217. <https://doi.org/10.2478/orga-2019-0013>
- Stewart, L. (2024, April 8). Citing ATLAS.ti in your research. *ATLAS.ti*. <https://atlasti.com/research-hub/citing-atlas-ti-in-your-research>
- Tallerico, M. (2000). Gaining access to the superintendency: headhunting, gender, and color. *Educational Administration Quarterly*, 36(1), 18–43. <https://doi.org/10.1177/00131610021968886>
- The Oxford Handbook of Cognitive Sociology. (n.d.). Google Books. [https://books.google.nl/books?hl=nl&lr=&id=DdGaDwAAQBAJ&oi=fnd&pg=PA305&dq=assessing+cultural+fit&ots=EfeBbFONZd&sig=y46uknLG4i6WvZ4bTFm5GczkPW8&redir\\_esc=y#v=onepage&q=assessing%20cultural%20fit&f=false](https://books.google.nl/books?hl=nl&lr=&id=DdGaDwAAQBAJ&oi=fnd&pg=PA305&dq=assessing+cultural+fit&ots=EfeBbFONZd&sig=y46uknLG4i6WvZ4bTFm5GczkPW8&redir_esc=y#v=onepage&q=assessing%20cultural%20fit&f=false)
- Trainer, T. D., Taylor, J. R., & Stanton, C. (2020). Choosing the best robot for the job: Affinity Bias in Human-Robot Interaction. In *Lecture notes in computer science* (pp. 490–501). [https://doi.org/10.1007/978-3-030-62056-1\\_41](https://doi.org/10.1007/978-3-030-62056-1_41)
- Ulrich, D., Kryscynski, D., Ulrich, M. D., & Brockbank, W. (2017). Competencies for HR professionals who deliver outcomes. *Employment Relations Today*, 44(2), 37–44. <https://doi.org>
- Uppal, P., AND Digital, & Censuswide. (2024). The CEO digital divide: are you accelerating enterprise value or slowing it down? In *AND Digital* (pp. 3–8). [https://landing.and.digital/hubfs/Group%20Accelerate%20Campaign%2004.24/The%20CEO%20Digital%20Divide%20Report%20\(1\).pdf?utm\\_campaign=AND%20Accelerate%20%20STV&utm\\_medium=email&hsenc=p2ANqtz-](https://landing.and.digital/hubfs/Group%20Accelerate%20Campaign%2004.24/The%20CEO%20Digital%20Divide%20Report%20(1).pdf?utm_campaign=AND%20Accelerate%20%20STV&utm_medium=email&hsenc=p2ANqtz-)

**Interviewer:** Max Bodde  
**Age:** 23  
**Institution:** University of Twente  
**Purpose:** Bachelor thesis  
**Interview Format:** Semi-structured interviews  
**Consent:** Obtain spoken consent and full name of the interviewee

## Introduction

### 1. Introduction to the Interview

Briefly introduce myself and the purpose of your thesis.

Explain the structure of the interview and the main themes i will cover.

Ensure the interviewee understands that their participation is voluntary and that they can withdraw at any time.

Obtain spoken consent and record their full name.

ask the interviewee to describe his/her job and her tasks. In this way you can ask him/her laterly in which tasks they envision a role for the social robot.

## Section 1: Perceived Usefulness

2. Question: Do you think using Social Robot will make you a better interviewer? If yes/no, why?

Benefit: Understanding the candidate's ability to evaluate how robots can improve efficiency and output in various work environments.

Show video 1

3. Question: Can you describe a scenario where the implementation of robots can improve in the future in the job interview?

Follow-up Questions:

How would you measure the impact of robots in these scenarios?

4. Question: What method would you use to measure the effectiveness of robots in achieving business goals?

## Section 2: Perceived Ease of Use

5. Question: What adaptations are crucial to ensure that robots are needed for employees with varying levels of technical expertise?

Benefit: Understanding how to make robots accessible to a diverse workforce, thus improving adoption rates and minimizing training costs.

Follow-up Questions:

Can you give examples of design features that enhance user-friendliness?

6. Question: How would feel about any initial hesitance when introducing a new robotic system?

## 11 APENDIX

### 1 Interview Information

Benefit: Learning strategies to achieve smoother transitions and ensure higher acceptance and use of robotic systems.

Follow-up Questions:

What are the common sources of resistance you've observed?

What specific steps would you take to minimize these concerns?

### Section 3: Attitude Toward Using

- Question: What factors do you believe would influence your attitudes toward working with robots?

Benefit: key elements that affect employee perceptions and attitudes, helping to tailor robot implementation strategies.

Follow-up Questions:

What role does prior experience with technology play in shaping these attitudes?

- Question: How can organizations keep a positive attitude among employees towards the integration of robots in their daily tasks?

Benefit: Exploring methods to build a supportive culture around robotic technology, leading to higher morale and productivity.

Follow-up Questions:

What communication strategies would you use?

How would you involve employees in the integration process?

- Question: Ask instead: do you have any previous experiences with robots or AIs in your organization? How was the implementation process?

Benefit: Highlighting the importance of incorporating user feedback to improve robot design and functionality, thereby increasing user satisfaction.

Follow-up Questions:

What channels were used to gather feedback?

How did the changes impact overall satisfaction and productivity?

address the confidentiality of their responses and how their input will contribute to the research.

### 13. Next Steps:

Inform the interviewee about any follow-up communications or additional steps in the research process.

Provide my contact information for any future questions or clarifications.

### Documentation

Ensure all responses are recorded accurately.

Take notes on key points and any follow-up questions that arise during the conversation.

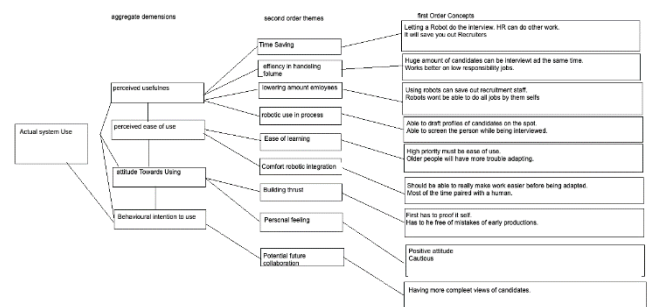
Confirm that the interviewee's spoken consent and full name are documented

The video shown to interviewees:

<https://www.youtube.com/watch?v=IHawEOHtOh0>



The model used in the Thesis



### Section 4: Behavioral Intention to Use

- Question: if you have the possibility to use a robot during the interview phase, how would you use it? Why/Why not?

- Question: How would you overcome barriers that might keep employees from intending to use robots, such as fear of job displacement or mistrust of technology?

### Conclusion

#### 12. Wrap-up:

Thank the interviewee for their time and insights.

Ask if they have any final thoughts or additional comments on the topic.

