Research Proposal

Human vs. AI Interview Agents: Behavioral and Attitudinal Differences and Their Impact on Interview Performance

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Research Proposal:
Understanding Human-AI Dynamics in Employment Interviews

Background

The use of technology-mediated interviews, particularly Asynchronous Video Interviews (AVI), has become increasingly common in recruitment settings due to its efficiency and flexibility (Dunlop et al., 2022; Langer et al., 2017). However, AVIs often lack essential social cues, such as eye contact and body language, which are crucial for building trust and managing impressions, ultimately impacting candidate performance (Rizi & Roulin, 2023; Blacksmith et al., 2016). Recent advancements in AI technologies, such as OpenAI's ChatGPT-4 and other interactive agents, are pushing AVI towards more engaging two-way experiences (Knight & Rogers, 2024). However, it remains unclear how these human-like AI agents influence candidates' psychological and behavioral responses in high-stress scenarios like job interviews.

The literature suggests that richer media environments, which closely mimic face-to-face interactions, enhance emotional engagement and facilitate better performance (Daft & Lengel, 1986; Kock, 2004). Yet hyper-realist interview agent designs can sometimes lead to negative outcomes due to the Uncanny Valley effect, where candidates feel uneasy or distrustful (de Borst & de Gelder, 2015). Furthermore, CASA theory (Nass et al., 1994) posits that people respond to computers with human-like traits as if they were social actors, impacting perceptions of trust and authenticity (Kim & Hur, 2023). Given the rapid integration of AI into recruitment, it is critical to explore how candidates adjust their behaviors based on whether they believe they are interacting with a human or AI.

Research Objective

The primary objective of this study is to investigate how candidates' psychological and behavioral responses differ when interviewing with AI versus human agents, focusing on trust, rapport-building, and performance in high-stress scenarios like employment interviews. This research aims to provide insights into how perceptions of AI influence impression management strategies and to highlight the implications for designing more effective AI-driven recruitment tools.

Study Design and Methodology

The study will employ a mixed-subject experimental design. All 20 participants (10 males and 10 females) will complete two interview sessions: one with a human interviewer and one with an AI interviewer, representing the within-subjects component. The order of conditions (AI-first vs. human-first) will be randomly assigned to each participant, with a one-week washout period between sessions to mitigate potential carryover effects. Each session will include structured interview questions, and the participants' responses will be recorded and analyzed for verbal and non-verbal behaviors, including emotional engagement, social presence, and trust.

The between-subjects component involves the AI interview condition, where participants will be randomly assigned to receive either positive or negative feedback from the AI interviewer. This feedback manipulation will assess how varying levels of feedback influence participants' emotional responses, perceived fairness, and impression management in AI-driven interviews. This additional manipulation allows for a deeper understanding of how feedback from an AI interviewer affects candidate behavior and attitudes.

The study will be conducted virtually via Zoom, and all sessions will be video recorded for detailed qualitative and quantitative analysis. To maintain authenticity in the AI condition, participants will be led to believe they are interacting with a real AI system, although the interviewer will be portrayed by a

human actor. After completing both sessions, participants will receive a full debriefing disclosing the true nature of the study and explaining the use of deception.

Target Population and Recruitment

Participants will be recruited through Prolific, an online research platform that ensures anonymity and reliable data collection. They must be at least 18 years old, reside in the U.S., and have reliable internet access. All interactions and data collection will occur virtually, maintaining participant confidentiality through anonymized identifiers.

Data Collection and Analysis

Data collection will include video recordings, self-reported measures, and manipulation check responses. Quantitative data will be analyzed using descriptive and inferential statistics (e.g., t-tests, ANOVA) to compare the two conditions, while qualitative data will be coded for themes related to rapport, trust, and self-disclosure. This mixed-method approach will provide a comprehensive understanding of the factors shaping candidate behavior in human-AI interactions. Results will be used to inform the development of more nuanced and human-centric AI recruitment technologies, emphasizing the balance between efficiency and candidate experience.

Ethical Considerations

The study involves minor deception, which is necessary to assess genuine behavioral responses to the AI condition. Participants will be fully informed during the debriefing process, and all data will be stored securely with access limited to the research team. Participants will be compensated for their time and can withdraw at any stage without penalty.

The proposed research addresses an important gap in understanding how AI impacts candidates' performance and psychological well-being during job interviews, offering insights into the design of more effective and ethical AI-based hiring systems.

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