NORTHERN ILLINOIS UNIVERSITY

College of Business

Where the Classroom Meets the Business World

Using AI in Qualitative Research

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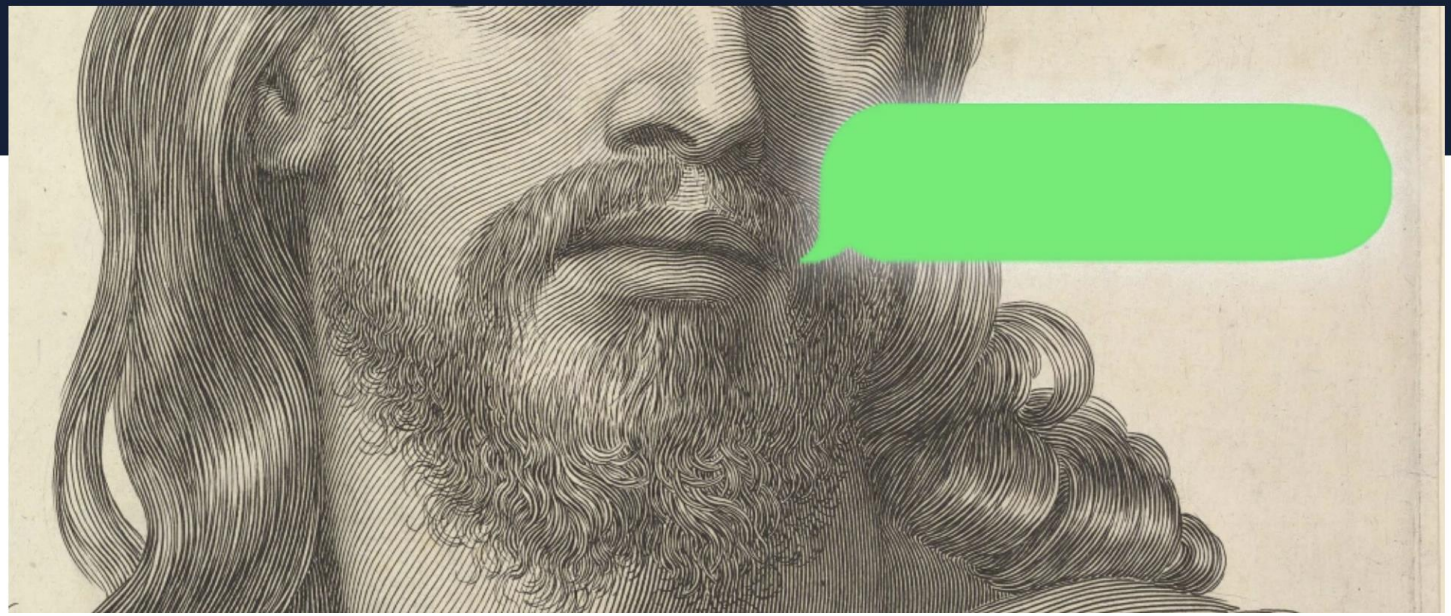
ARTIFICIAL INTELLIGENCE

A chatbot that lets you talk with Jesus and Hitler is the latest controversy in the AI gold rush

The Historical Figures app is available in Apple's App Store and lets you chat with notable people from history re-animated by artificial intelligence.



FURKAN A. GUR

1 RESEARCH

- Qualitative interviews
- Transcription
- Field notes
- Themes & data analysis aid

2 TEACHING

- Market research
- Workshop on how to use AI for entrepreneurship
- Algorithms & AI
- Future thinking & simulations

3 FELLOW

- Tech for Good Workshops
  - Super Better
  - Post-AI Literacy
- AIs role in raising funds

Background & Gap

- Traditional qualitative methods: rich, contextual, but resource-intensive (time, cost, access).

- AI tools (e.g., LLMs) already assist in transcription, coding, and translation — yet remain in support roles.

- Studies have highlighted its utility in
  - transcription services (e.g., Xiao & Hohmann, 2021),
  - automated or semi-automated coding (Qiao et al., 2024),
  - translation across multilingual interviews (Barrera et al., 2025)

Background & Gap

- Growing sophistication of AI — especially generative models like GPT — opens new avenues for qualitative research (Wang, 2024; Leippold, 2023)
- AI-simulated interviews now serve as pilot tools for refining protocols and validating research designs (Potekhin, 2024; Kupiec, 2024)
- Expanded analytic use: AI supports causal mapping (Jalali & Akhavan, 2024) and automated coding (Qiao et al., 2024)
- Dual reality: Efficiency and scalability vs. limited contextual sensitivity and interpretive nuance (Dengel et al., 2023)

Background & Gap

- Gap: Limited exploration of AI as an active participant in qualitative studies rather than merely an analytic assistant.
- Motivation: Address both the promise and limits of AI as a qualitative collaborator — not just an assistant.
- Emerging question: Can AI simulate meaningful interaction and contribute to knowledge creation, not just processing?

Research Question

Accordingly, we explore:

How can AI be effectively used for qualitative research?

More specifically:

Can AI simulate credible interview responses using predefined personas?

How does AI-generated data compare with human interviews in richness, consistency, and context sensitivity?

What are the ethical and methodological boundaries of AI use in interpretive research?

Methodology

- Custom GPT model (ChatGPT-based) fine-tuned with scenario-driven instructions and persona profiles.
- Simulated semi-structured interviews: AI “respondents” mirror demographic and psychographic diversity.
- Comparative work:
  - 28 real-world interviews (human data).
  - 28 simulated interviews (AI-generated).
- Analytical Framework:
  - Thematic and comparative coding (Qiao et al., 2024)
  - Causal relationship mapping (Jalali & Akhavan, 2024)
  - Deductive + inductive cycles for rigor and reflexivity

Context

- Premises and Pitfalls of Cooperative Governance in Entrepreneurial Ventures
- A separate research project on governance in employee-owned ventures
- Interviews with Founders; Co-founders; Board members; Directors
- Other sources of data for understanding the context:
  - News data
  - Archival data from ventures
  - Researcher notes

Summer Till Now

High-level overview of my research process from summer to now.

- Learn Research Context and gather data
- GPT Q&A
- Comparison Table
- Custom GPT
- Own platform

Starting Process

- Started with learning what the project was about
- Receiving the data (personas + human transcripts)
- Decided how many transcripts and AI Transcripts I would analyze per week

GPT Q&A

- Used similar interview prompts from original study
- Gathered AI responses in transcript form
- Assessed tone, depth, and conceptual accuracy of AI-generated responses

Comparison Tables

- Developed 4 evaluation dimensions: Catch, Miss, Strengths, Weaknesses

- Used thematic coding to compare recurring ideas across human and AI transcripts

- Found AI strong in structure but weak in emotion & nuance

Custom GPT

- Designed Custom GPT to automate simulation & comparison

- Streamlines persona input and transcript evaluation

- Prototype for future AI-assisted qualitative tools

Custom GPT

Gioia Interview & Thematic Analysis Assistant

By Anthony Baptiste

Simulates interviews and performs Gioia Method analysis with thematic structuring.

Simulate a full set of interview transcripts based...

Compare the interviews and identify common...

Use the Gioia Method to create a coding structur...

Build a theoretical framework based on the Gioia...

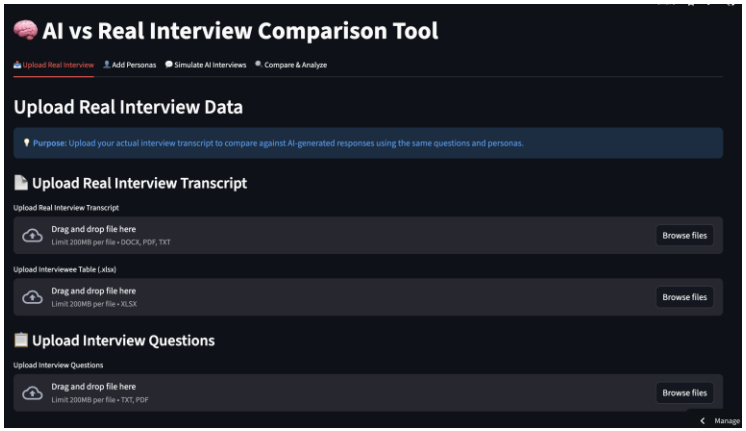
+ Ask anything

ChatGPT can make mistakes. OpenAI doesn't use Furkan Gur's Workspace workspace data to train its models.

Own Platform

Created a similar AI platform hosted on Streamlit like the custom GPT

- Focuses three key things
  - Improved Thematic Analysis
  - Simpler UI
  - Ensures research privacy by not saving data



Best practices

- Descriptive and archival information (e.g., corporate website, news articles) about interviewees help with the specificity of interview content
- You can adjust prompts to get better AI generated interview output
- Interviews need to be anonymized before uploading on Chat GPT
- You can limit the use your interview data on Chat GPT by adjusting settings and using a private workspace
- Custom GPT streamlines some functions but not as powerful as a stand-alone platform that can also ensure data safety
- AI can be used for data organization (which already exists in NVIVO & Atlas.Ti) and for facilitating thematic analysis to aid emerging theoretical insights of the researcher
  - This could be an opportunity to process much larger amounts of data that we could not do before

Challenges & opportunities

- De-skilling (or AI slop)
- Journal attitudes towards AI adoption
- Automation vs augmentation
  - Automation: full automation of qualitative research
    - Potentially faster and easier
    - But, superficial, descriptive, and biased
  - Augmentation: researchers collaborate with AI to conduct qualitative research
    - Potentially deeper understanding, commanding larger datasets
    - But, more time consuming
  - Potential for better iteration between data, existing theories, and emerging new theories
- Hallucinations!!!
- Ethics & data privacy

Comparative Observations

1. What AI "Catches" Well

Coverage of key thematic content:

- Captures **core business details**
- Identifies **organizational themes** like democracy, transparency, and empowerment.
- Integrates **technological and motivational** aspects such as AI usage, startup longevity, and innovation.
- Provides **coherent, logically sequenced responses** — easy to follow and clearly structured.

2. What AI "Misses"

Contextual, emotional, and situational depth:

- Lacks detail about **personal experience**, **funding**, and **legal or emotional nuances**.
- Does not ask for **clarifications** or follow up organically.
- Misses **relational cues** (e.g., references to coworkers, cofounders, or culture).
- Avoids **deviation** from scripted prompts

3. Strengths

- **Clear and structured**: Eliminates filler language and repetition.
- **Efficient and concise**: Responses are streamlined and logically ordered.
- **Analytically helpful**: Highlights core topics and can even suggest related sources.
- **Consistent formatting**: Easier for comparative coding and thematic mapping.

4. Weaknesses

- **Impersonal tone**: Lacks emotional texture and lived experience.
- **Over-generalization**: Provides generic examples instead of situated realities.
- **No self-reflection**: Cannot express uncertainty, ethical stance, or learning moments.
- **Limited imagination**: Doesn't improvise or offer analogies that link to broader contexts.

Discussion

- We explore the potential of AI conducted interviews.
  - Access to managers is often costly, logistically complex, and constrained by limited availability, yet management research frequently relies on interview data
- AI interviews turn out to be generic and superficial…
- AI simulations cannot replace the rich interactions in qualitative interviews
- By identifying weak prompts and surfacing generic responses, AI provides researchers with a diagnostic tool that strengthens data collection.

Discussion

- We show how AI personas can function as a protocol refinement tool, a comparative method that highlights what is generic versus situated, a synthetic form of member check to test emerging categories, and a reflexive partner that reveals researchers' analytic biases.

- These roles reposition AI as a methodological instrument that augments rigor while keeping human data at the core of theorizing.

- Thematic analysis that is conducted on a GPT wrapper which runs on an independent platform and does not store or share interview data with OpenAI.

Discussion

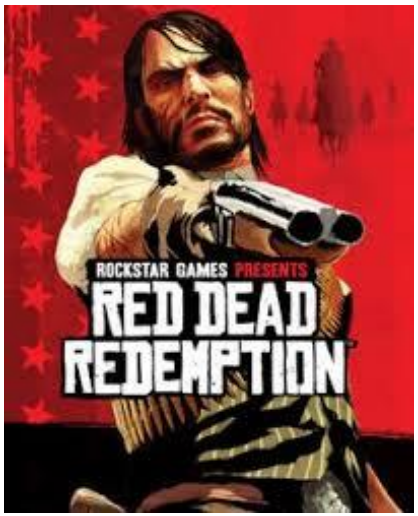
- Qualitative researchers have been cautious, citing concerns about authenticity, contextual understanding, and the irreplaceable value of lived human experience.

- By systematically comparing human and AI-generated interviews, our study provides evidence-based insights into these concerns, illustrating both the opportunities and the boundaries of AI integration.

- We argue that AI, when carefully bounded and transparently reported, can enhance methodological quality without displacing the interpretive strengths of qualitative traditions.

If used correctly, [AI] will be a great tool… If you use it to try and substitute for creativity, it's going to be really generic.

Dan Houser, Creator of GTA & RDR at Rockstar



Thank you for your attention…

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