UF College of Education
UNIVERSITY of FLORIDA

AI for Qualitative Research

EDF 6938 | Spring 2025

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Location/Time/Modality: NRN 2014, W Period 3-5 (9:35am – 12:35pm)
Office Location: Norman Hall, 2711-l
Office Hours: Email for appointment

26469, Section 361
Credits: 03

Course Summary

Graduate catalog description: *Special topics.*

This course gives an overview of how qualitative research methods can be adapted and optimized using state-of-the-art AI-driven systems to assist research design, data collection, and data analysis. Specific qualitative issues will be addressed from week to week with an emphasis on both: 1) the value AI brings to qualitative research practice and 2) the insights that qualitative methods themselves bring to AI-assisted research. We will pay special attention to understanding the possibilities and limitations of current AI applications, platforms, and models; methodological value alignment; and qualitative frameworks from the perspective of data science. No prior software or AI-driven tool familiarity will be needed. No qualitative research prerequisites are required.

Course Outcomes

Upon completion of this course, students will be able to:

1) Design an AI-augmented qualitative study
2) Use AI to collect qualitative data
3) Use AI to analyze qualitative data

Course Objectives

Upon completion of this course, students will be able to:

1) Understand how generative AI architectures can be adapted to qualitative methods
2) Navigate current limitations of AI systems in relation to qualitative research
3) Create and implement ethical qualitative research designs augmented by AI

Required Textbooks

NA

Grading Scale

This course uses the grading scale approved by the University of Florida (provided below).

93 to 100 A
90 to <93 A-
87 to <90 B+
83 to <87 B
80 to <83 B-
77 to <80 C+
73 to <77 C
70 to <73 C-
67 to <70 D+
63 to <67 D
60 to <63 D-
<60 Not passing

Details on UF's graduate school grading policies for assigning grade points can be found in the Graduate School Catalog available here:
http://gradcatalog.ufl.edu/content.php?catoid=12&navoid=2750

Academic Honesty Policy

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (http://www.dso.ufl.edu/sccr/process/student-conduct-honor- code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor.

Disability Resource Center

Please do not hesitate to ask for accommodation for a documented disability. Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Online Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate.

Course Website and Communication

The course website will run via Canvas through the UF e-learning website; go to http://elearning.ufl.edu and click on the Canvas Login button. The course site will be used to post relevant announcements, reading, lecture materials, links, assignments and quizzes, etc. You are responsible for checking this site for announcements and to verify that your grades are recorded correctly.

Technical Assistance

If you require any technical assistance, please click the "Help" button on the upper right side of Canvas screen to submit a request for help. You can also call the UF Help Desk at 352-392-4357.

Additional Resources

Students facing difficulties completing the course or who are in need of counseling or urgent help may contact:

U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit U Matter, We Care website to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit the Counseling and Wellness Center website or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the Student Health Care Center website.

University Police Department: Visit UF Police Department website or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the UF Health Emergency Room and Trauma Center website.

GatorWell Health Promotion Services: For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the GatorWell website or call 352-273-4450.

E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

Library Support: Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall, 352-392-2010 or to make an appointment 352-392-6420. General study skills and tutoring.

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Syllabus Updates

This syllabus represents current plans and objectives. As we go through the semester, those plans may need to change. Changes are not unusual and should be expected.

Assignment Paths

Please choose *one* Assignment Path.

Assignment Path 1

Assignment A (10 points). Write a 250-300 word description of your research interests, potential future uses of qualitative research, and up to five major questions you have about qualitative research and AI. If applicable, please describe your own current AI uses for research (including any relevant applications, platforms, and models).

Assignment B (35 points). Write a 500-1000 word methods section appropriate for an article-length work describing an architecture for using AI to collect qualitative data for a research project, prospective or ongoing. Please be sure to include descriptions of the AI system(s) you are using and be attendant to any shortcomings. Also, please include a justification showing what value AI brings to your qualitative data collection, preferably going beyond adding speed and efficiency to the process. Include potential ethical concerns, if any.

Next, if your design includes output from an AI system, attach a document of what it generated.

Assignment C (45 points). Write a 500-1000 word methods section appropriate for an article-length work describing an architecture for using AI to analyze qualitative data for a research project, prospective or ongoing. Please be sure to include descriptions of the AI system(s) you are using and be attendant to any shortcomings. Also, please include a justification showing what value AI brings to your qualitative data analysis, preferably going beyond adding speed and efficiency to the process. Include potential ethical concerns, if any.

Next, if your design includes output from an AI system, attach a document of what it generated.

Assignment D (10 points). Write a 250-750 word reflection on what you learned about qualitative research and AI this semester. Pay attention to anything that may have surprised you and any perspectives that you may have had that have changed.

Assignment Path 2

Work with the instructor to design your own assignment or set of assignments equivalent to Assignment Path 1. If you choose this option, please share what you are proposing by Week 8 of the course.

Due dates for all assignments will be posted in Canvas.

Course Outline of Topics EDF 6938 – Spring 2025

Week	Date	Section	Topic	Article Readings
1	1/15	Introduction	"Is Python Knowledge a Prerequisite?": A Friendly, No-Code Introduction to AI in Qualitative Research	--
2	1/22		Principles of Qualitative Prompt Engineering	Ulmer & Salvo (draft)
3	1/29	Qualitative Research Designs for AI	General Design Considerations	Salvo & Ulmer (draft)
4	2/5		Navigating Current AI Limitations	Thominet et al. (2024)
5	2/12		Open-Source AI Designs	Katz et al. (2024)
6	2/19		Issues and Policies for AI Authorship?	Crawford et al. (2023)
7	2/26	AI-Assisted Data Collection	Ethical Considerations	Vianello et al. (2023)
8	3/5		Interview Protocols, Transcription, and Summary	Jalali & Akhavan (2024)
9	3/12		User Generated AI Images: Toward AI Photo Elicitation? User Generated AI Images: Toward AI Photovoice?	Albaghajati et al. (2023) Mahdavi Goloujeh (2024)
Spring Break				
10	3/26	AI-Assisted Data Analysis	AI-Augmented Qualitative Analysis I	Hitch (2024)
11	4/2		AI-Augmented Qualitative Analysis II	Morgan (2023)
12	4/9		AI-Assisted Thematic Analysis I	Christou (2024)
13	4/16		AI-Assisted Thematic Analysis II	Zhang (2023)
14	4/23	Course Wrap-Up	Bringing It All Together	van Manen (2023)

Article Readings

Introduction

Principles of Qualitative Prompt Engineering
Ulmer & Salvo (draft)

Qualitative Research Designs for AI

General Design Considerations for AI in Qualitative Research
Salvo & Ulmer (draft)

Navigating Current AI Limitations
Thominet, L., Acosta, K., Amorim, J., & Sohan, V. K. (2024, October). How our AI-assisted qualitative analysis failed. In *Proceedings of the 42nd ACM International Conference on Design of Communication* (pp. 212-216).

Open-Source AI Designs
Katz, A., Fleming, G. C., & Main, J. (2024). Thematic analysis with open-source generative AI and machine learning: A new method for inductive qualitative codebook development. *arXiv preprint arXiv:2410.03721*.

Issues and Policies for AI Authorship?
Crawford, J., Cowling, M., Ashton-Hay, S., Kelder, J. A., Middleton, R., & Wilson, G. S. (2023). Artificial intelligence and authorship editor policy: ChatGPT, Bard Bing AI, and beyond. *Journal of University Teaching and Learning Practice*, *20*(5), 1.

AI-Assisted Data Collection

Ethical Considerations
Vianello, A., Laine, S., & Tuomi, E. (2023). Improving trustworthiness of AI solutions: A qualitative approach to support ethically-grounded AI design. *International Journal of Human–Computer Interaction*, *39*(7), 1405-1422.

Interview Protocols, Transcription, and Summary
Jalali, M. S., & Akhavan, A. (2024). Integrating AI language models in qualitative research: Replicating interview data analysis with ChatGPT. *System Dynamics Review*.

User Generated AI Images: Toward AI Photo Elicitation?

Albaghajati, Z. M., Bettaieb, D. M., & Malek, R. B. (2023). Exploring text-to-image application in architectural design: Insights and implications. *Architecture, Structures and Construction*, *3*(4), 475-497.

User Generated AI Images: Toward AI Photovoice?

Mahdavi Goloujeh, A., Sullivan, A., & Magerko, B. (2024, May). Is it AI or is it me? Understanding users' prompt journey with text-to-image generative AI tools. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (pp. 1-13).

AI-Assisted Data Analysis

AI-Augmented Qualitative Analysis I

Hitch, D. (2024). Artificial intelligence augmented qualitative analysis: The way of the future? *Qualitative Health Research*, *34*(7), 595-606.

AI-Augmented Qualitative Analysis II

Morgan, D. L. (2023). Exploring the use of artificial intelligence for qualitative data analysis: The case of ChatGPT. *International Journal of Qualitative Methods*, *22*.

AI-Assisted Thematic Analysis I

Christou, P. A. (2024). Thematic analysis through artificial intelligence (AI). *The Qualitative Report*, *29*(2), 560-576.

AI-Assisted Thematic Analysis II

Zhang, H., Wu, C., Xie, J., Lyu, Y., Cai, J., & Carroll, J. M. (2023). Redefining qualitative analysis in the AI era: Utilizing ChatGPT for efficient thematic analysis. *arXiv preprint arXiv:2309.10771*.

Course Wrap-Up

Bringing It All Together

van Manen, M. (2023). What does ChatGPT mean for qualitative health research? *Qualitative Health Research*, *33*(13), 1135-1139.

Optional Technical Readings

Vaswani, A., Shazeer, N., Parmar, N., Uszkoreit, J., Jones, L., Gomez, A. N., ... & Polosukhin, I. (2023). Attention is all you need. *arXiv preprint arXiv:1706.03762*.

Chen, Z., Balan, M. M., & Brown, K. (2023). Language models are few-shot learners for prognostic prediction. *arXiv preprint arXiv:2302.12692*.