SIADS 601 Fall21: Qualitative Inquiry for Data Scientists

Instructor and Course Assistants

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Course Overview and Prerequisites

Overview

This course provides an introduction to qualitative research methodology in a way tailored to data scientists. Through qualitative research, data scientists can gain hunches about, generate hypotheses, and develop narratives – all of which are useful in the analysis and reporting of quantitative data. Methodologically, this course focuses on semi-structured interviews, qualitative data analysis through affinity walls, and the construction of report narratives. Students will develop relevant skills through a project they identify in the first few days of the course.

Prerequisites: There are no prerequisites beyond college-level communication skills.

Learning Outcomes

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

1. Collect, represent, and analyze qualitative data about a quantitative data set, by…
2. Conducting semi-structured interviews;
3. Processing interview notes into discrete pieces of qualitative data; and
5. Develop a narrative about qualitative findings that support later quantitative analysis.
6. Communicate qualitative findings in written form.

How to Get Help

If you have questions concerning the degree program, encounter a technical issue with Coursera, or issues using Slack, please submit a report to the ticketing system at umsimadshelp@umich.edu.

If you have an issue specific to the Coursera environment, you can also begin a live chat session with Coursera Technical Support (24/7) or view Coursera troubleshooting guides. (you may be asked to log in to your Coursera account).

For questions regarding course content, refer to the Communications Expectations section below.

Communication Expectations

- Please use email for all communication with the instructor. Response time may vary based on content, but he will respond to most email within 1 business day.
- Course announcements and discussion will occur on Canvas. However, individual communication to students may occur through umich.edu email.
Instructors will aim to have assignments graded and returned to you within 4 days from the date they are due. (Assignments submitted late may take longer to grade.)

Weekly Office Hours via Zoom (Ann Arbor, MI time):

Your instructor will hold weekly, synchronous office hours using the video-conferencing tool, Zoom. The schedule of office hours can be found by clicking on the Live Events link in the left-hand navigation menu. Additionally, all office hours will be recorded and archived so that you can retrieve. Pass code to join any office hours meeting is 601

Course Schedule

- **This course begins on Monday, September 27, 2021 and ends on Sunday, October 24, 2021.**
- Assignment due dates vary by week. Please see the schedule below and pay attention to due dates. All items are due at 11:59 pm, Eastern Time, on the date indicated (please see “Time Zones” note below).
- Week-by-week schedule
  - **Week 1**: You will define your course project, schedule interviews, and start drafting the interview protocol.
  - **Week 2**: You will complete the interview protocol and start interviews.
  - **Week 3**: You will complete interviews, complete data extraction, and start your affinity wall.
  - **Week 4**: You will complete your affinity wall and write a final report.

Grading and Assignments Overview

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All assignments are required to earn credit for this course:

- **Quizzes:** There are five quizzes throughout the course; it is recommended that you take them after watching the corresponding videos and readings.
- **Discussion Participation:** At three points during the course, you will be prompted to engage in light online discussion about the course content or assignments.
- **Peer Review:** You will be asked to provide feedback to your peers on four assignments. Through these reviews, you will receive quick feedback on your own work, and also have a chance to see how others have completed their assignments.
- **Project Definition:** Identify a data set, a broad question about it, and three data-set stakeholders who are willing to be interviewed by you. Those will compose a project definition that you use to practice all the skills taught throughout this course.
- **Interview Protocol:** Write a protocol for the three interviews that you will conduct. The protocol includes an introduction section, a series of main questions and follow-up questions, and a conclusion section.
- **Data Extraction:** Extract discrete items of qualitative data from the interviews that you have conducted.
- **Affinity Wall:** Conduct qualitative data analysis through a process of hierarchical clustering and summarization.
- **Final Report:** Write up the findings of your analysis in the framework of a coherent narrative.

Note: The course requires conducting three semi-structured interviews. These are not graded, but are an essential part of the course. You will not be able to complete the last three assignments (worth a total of 45% of the course grade) without doing the interviews.

**Instructional Material**

This course is taught through video segments, handouts, and external readings. Video segments and handouts will be made available through the Coursera platform. All readings for this course are available online, either as a direct link or through the U-M library.

**Course Handouts:**

https://drive.google.com/drive/folders/1UQIfYZtu6eOaLR2T9XDUX3zsQrSKQU9Te?usp=sharing

**External readings:**

  https://medium.com/indeed-engineering/qualitative-before-quantitative-how-qualitative-methods-support-better-data-science-d2b01d0c4e64
  - **Skim** the section on semi-structured interviews on pp. 30-77. You do NOT have to read in detail. You do NOT have to do the embedded exercises. This document is useful as a reference for any time you conduct semi-structured interviews.
  - **Skim** – you do NOT have to read in detail.
Letter Grades, Course Grades, and Late Submission Policy
Refer to the MADS Assignment Submission and Grading Policies section of the UMSI Student Handbook (access to Student Orientation course required).

Academic Integrity/Code of Conduct
Refer to the Academic and Professional Integrity section of the UMSI Student Handbook. (access to Student Orientation course required).

Accommodations
Refer to the Accommodations for Students with Disabilities section of the UMSI Student Handbook (access to the Student Orientation course required).
Use the Student Intake Form to begin the process of working with the University’s Office of Services for Students with Disabilities.

Accessibility
All materials provided through Coursera should adhere to common accessibility standards, but if you have any challenges accessing material or completing assignments, do not hesitate to contact the instructors.

Help Desk(s): How to get Help
- Degree program questions or general help - umsimadshelp@umich.edu
- Coursera’s Technical Support (24/7) - https://learner.coursera.help/

Library Access
Refer to the U-M Library’s information sheet on accessing library resources from off-campus. For more information regarding library support services, please refer to the U-M Library Resources section of the UMSI Student Handbook (access to the Student Orientation course required).

Student Mental Health
Refer to the University’s Resources for Stress and Mental Health website for a listing of resources for students.

Student Services
Refer to the Introduction to UMSI Student Life section of the UMSI Student Handbook (access to the Student Orientation course required).

Time Zones
All announced date/times will be in U.S. Eastern Time. Be aware that the United States transitions from Eastern Standard Time (EST) to Eastern Daylight Time (EDT) on March 14, 2021 (Sunday) at 2am, EST. At that point, Eastern Time moves forward by one hour (i.e., what used to be 2am becomes 3am). All assignments are due at 11:59pm ET on the date indicated. If you’re not used to working across time zones, you may find it useful to use an online time-zone converter, e.g., https://www.timeanddate.com/worldclock/converter.html?iso=20200629T060000&p1=784.