

Lec 20

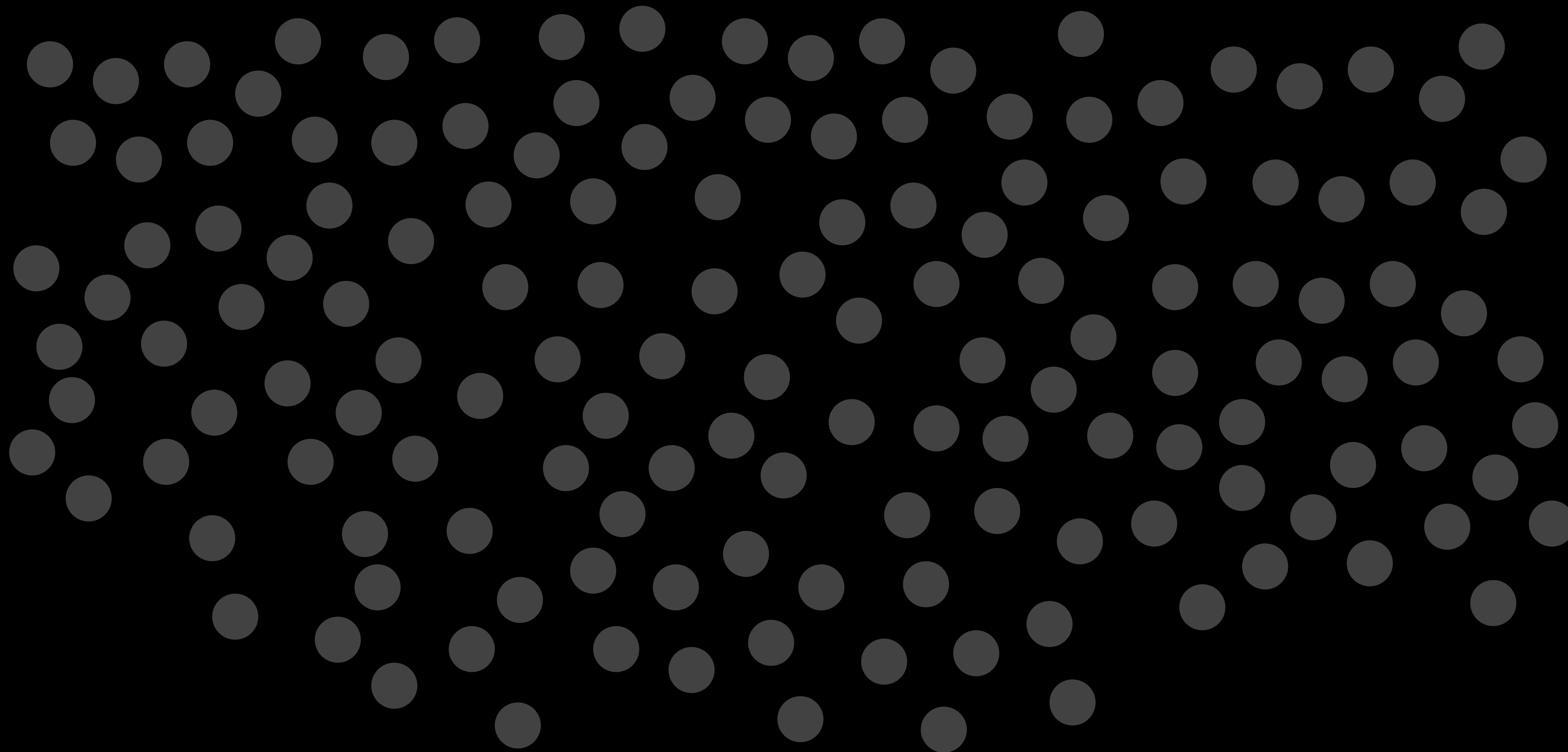
# Data Analysis

Qualitative vs Quantitative, Statistical Analysis, Thematic Analysis

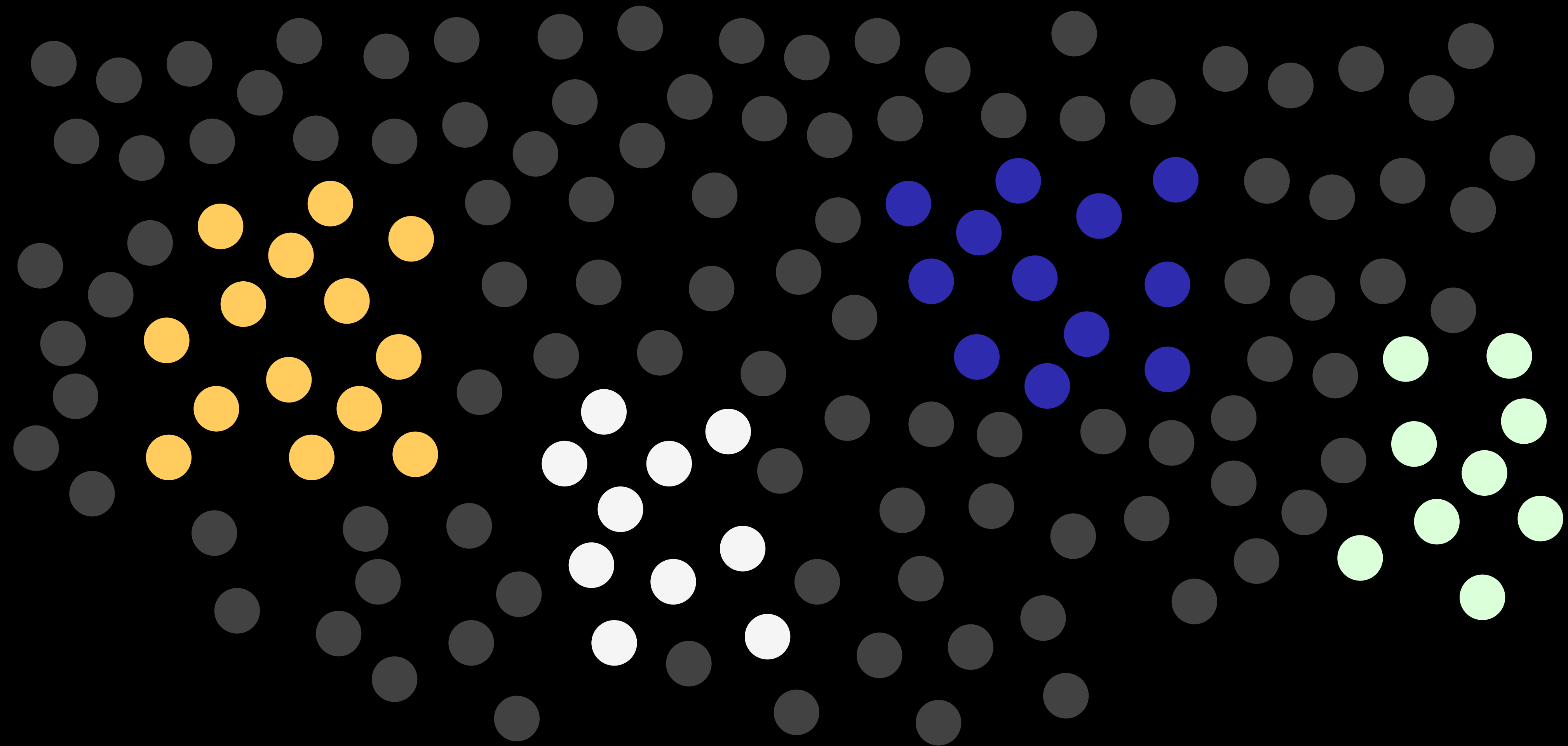
*Omar Hammad*

# Review Phase #1

**You have collected a lot of data**



**Now, you want want to make sense of it**









# **Multiple ways of analyzing data**

- Statistical Analysis
- Sentiment Analysis
- Thematic Analysis
- Coding (not programming)
- Mapping
- ...

# Thematic Analysis

*Theme is something important about the data in relation to the study goal. It represents a pattern of some kind, perhaps a particular topic or feature, found in the dataset, which is considered to be relevant and even unexpected with respect to the study goal*



## Group Thematic Analysis

**What are the common issues of the No-Code applications for non-programmers?**

- Open the Figma board from BB.
- Start searching for user reviews on social media & app stores
- Create a post-it that includes one piece of information (review summary, saying, number, .. etc)
- Add it to the closest group (if no group put it alone)

# **Tips on Affinity Diagramming**

- Be concise and specific
- Ask around and be active
- Read other's work
- Use visual aids if possible
- Ok to revise while iterating
- Gradually create clusters



## **Questions after clustering**

- Is an overall narrative starting to emerge, or are the themes quite disparate?
- Do some seem to fit together with others?
- If so, is there an overarching theme?
- In doing this, some of the original themes may not seem as relevant and can be removed.
- Are there some themes that contradict each other? Why might this be the case?



## **Practical Assignments 2/4 Define**

### **Objective:**

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To analyze and synthesize data gathered during the Discovery phase, using various analytical methods to identify themes, user needs, and pain points. This phase will help define clear, actionable problem statements for the next phase.

### **Instructions:**

#### 1. Data Analysis:

- Quantitative Analysis:
  - Organize and analyze numerical data (e.g., ratings, frequency of feedback themes).
  - Create at least three statistical visualizations (e.g., bar charts, pie charts) to summarize key findings.
- Qualitative Analysis:
  - Perform thematic analysis to identify at least 5 recurring themes from user reviews, interviews, and observations.
  - Conduct semantic analysis to extract deeper insights from user sentiments.

#### 2. Mapping Tools:

- Design personas for one distinct user group, including their goals, frustrations, and needs.
- Create empathy maps for at least one user archetypes, focusing on their thoughts, feelings, actions, and challenges.
- Develop a user journey map for one primary task, highlighting pain points and opportunities for improvement.
- Draft two scenarios for your persona, describing its interaction with the product in a specific context.

#### 3. Problem Definition:

Summarize your analysis and define at least 3 key problems to be solved in the next phase. Each problem statement should be user-focused, actionable, and rooted in the analysis. an example of a well-defined problem:

*"First-time users of the fitness tracking app struggle to log their workouts due to unclear navigation labels and lack of onboarding guidance. This causes frustration, particularly when they are at the gym and need a quick solution, resulting in reduced app usage and poor retention rates. Observational studies showed that 70% of new users abandoned the app after their first attempt to log a workout."*

It includes: The User's Goal, The Problem/Pain, The Context, Impact on the User, Evidence, Why It Matters

#### 4. Presentation:

Create a 5-minute presentation to share your key findings, mapping outputs, and problem statements with the class. Focus on clarity, logical flow, and impactful visual aids (e.g., charts, empathy maps).

### **Submission:**

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Submit your presentation slides to Blackboard. Be ready to present your findings in the next class.

### **Grading Criteria:**

#### 1. Data Analysis (10 points):

- Were both quantitative and qualitative analyses conducted thoroughly and appropriately?
- Are visualizations and themes well-documented?

#### 2. Empathy and Mapping (10 points):

- Are empathy maps, journey maps, personas, and scenarios detailed and user-centered?
- Do they effectively reflect the analyzed data?

#### 3. Problem Definition (5 points):

- Are problem statements clearly defined, actionable, and based on analysis?

#### 4. Clarity and Presentation (5 points):

- Is the report well-organized and easy to follow?
- Is the presentation engaging, clear, and insightful?