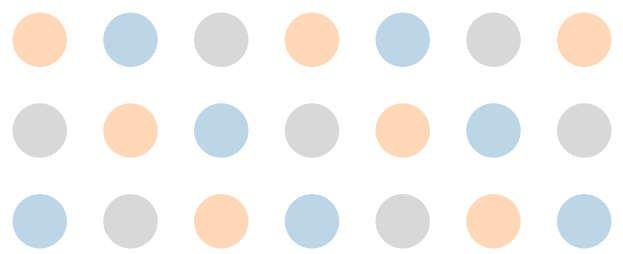


Discovering Patterns

A Visual Journey

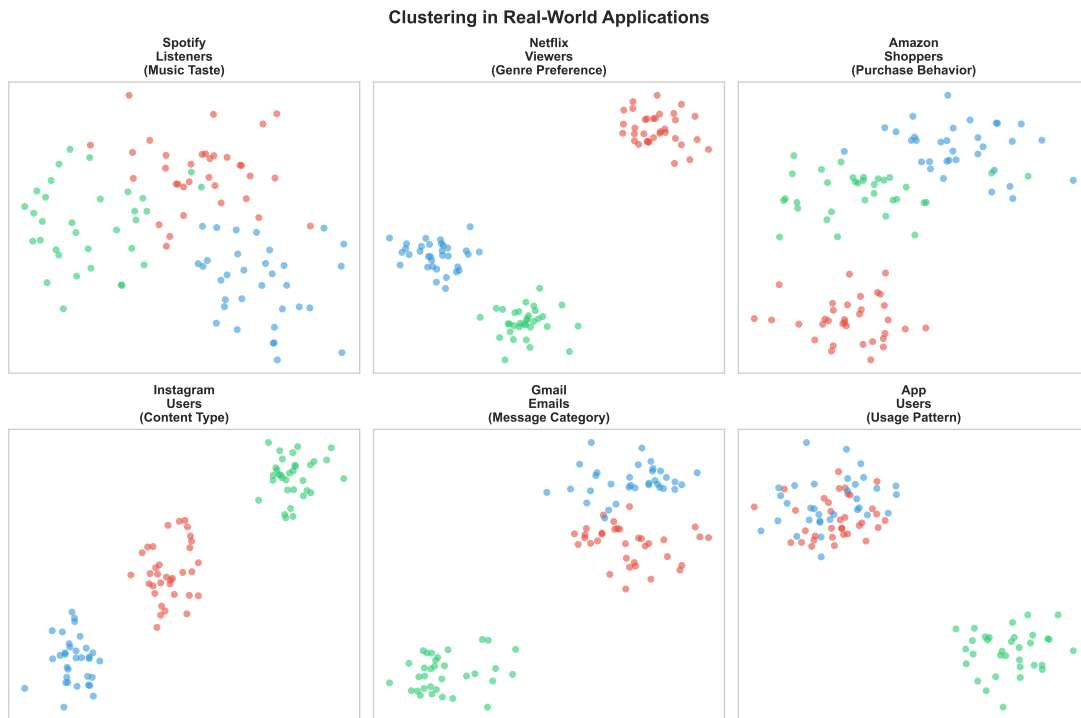


Name: _____

Date: _____

Discovery 1: Finding Hidden Patterns

Look at this chart and observe



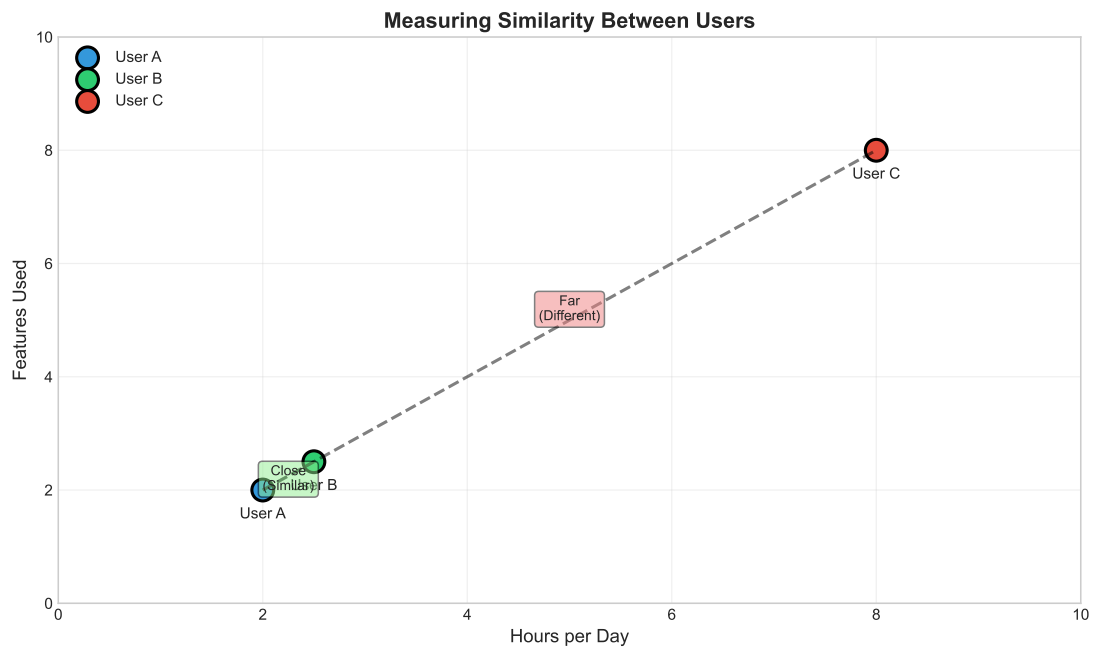
What do you see? Write your observations:

Questions to explore:

- How many distinct groups do you see?
- What makes points belong to the same group?
- Are some groups clearer than others?
- Could you group them differently?

Discovery 2: Understanding Similarity

How do we measure "closeness"?



Your discovery: Which points are most similar?

Think about:

- What makes two points "similar"?
- Does similarity change if you look at different features?
- Can points be similar in one way but different in another?

Discovery 3: Different Tools, Different Patterns

Same data, different methods



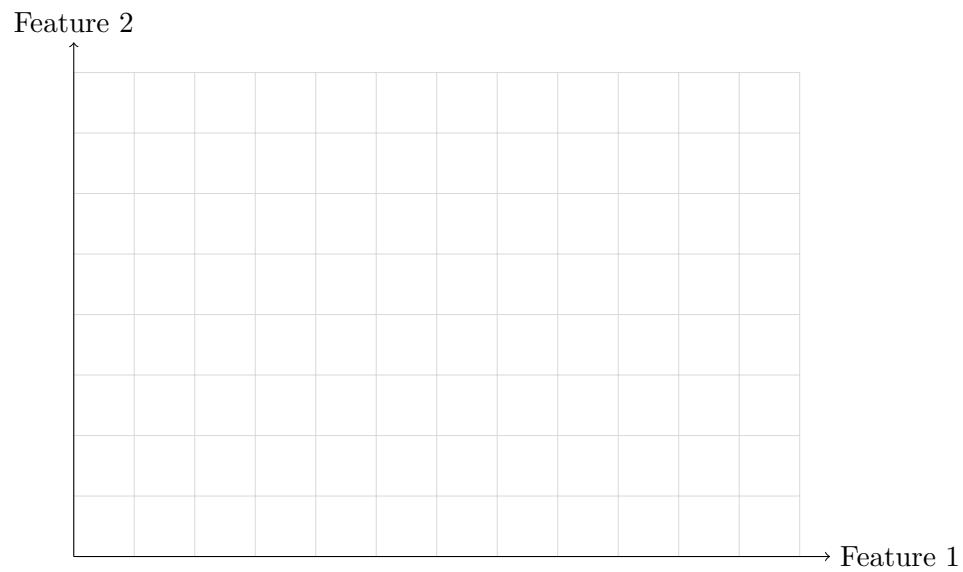
Compare the results: What differences do you notice?

Discover:

- Which method finds round groups?
- Which can find unusual shapes?
- Which creates a hierarchy?
- When might each be useful?

Create Your Own Pattern Discovery

Draw your own data points



Now group them: Draw circles around groups you see

Why did you group them this way?

What You Discovered

Your Key Discoveries

1. About patterns:

2. About similarity:

3. About different methods:

The big idea:

Machine learning helps us find patterns that are hard to see with our eyes, especially when there are many features to consider at once.

Next: We'll explore how these patterns help us understand innovation