

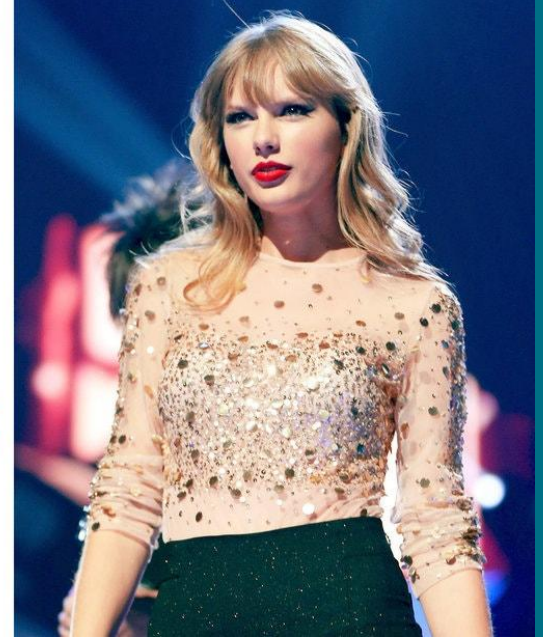
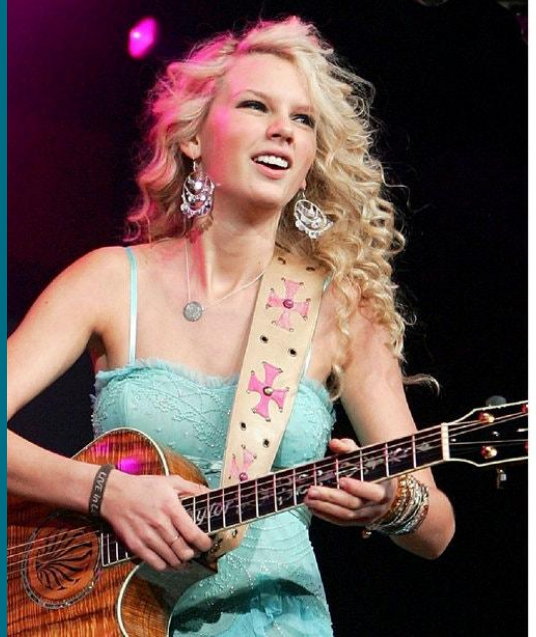
Taylor Swift Lyric Analysis

Lindsay Read



Intro

- Singer-songwriter
- 16 different genres (according to Spotify)
- Age 15: first record deal
- Age 17: first album released



Purpose

- What are some main topics she sings about?
- How have the topics changed over time?
- Do the topics have an effect on Album Sales?



NLP Process

NMF

TF-IDF Vectorizer

11 Topics

K-Means

n_clusters = 5

TSNE

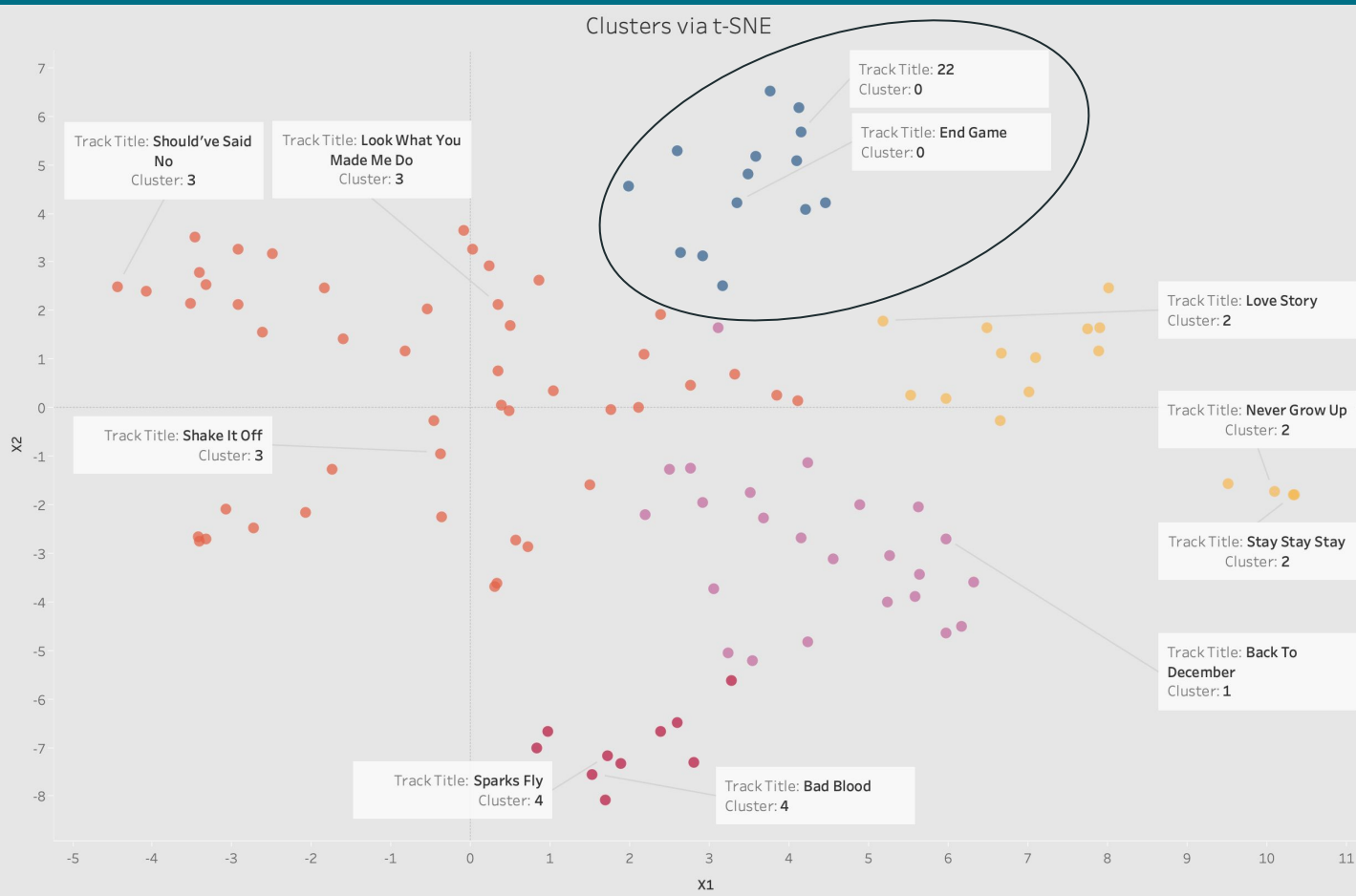
Visualization

2 Components

Clusters



- Cluster 0:
 - Topic 3 (moving on from past, thinking about future)
 - “Trying, new, end, feeling”

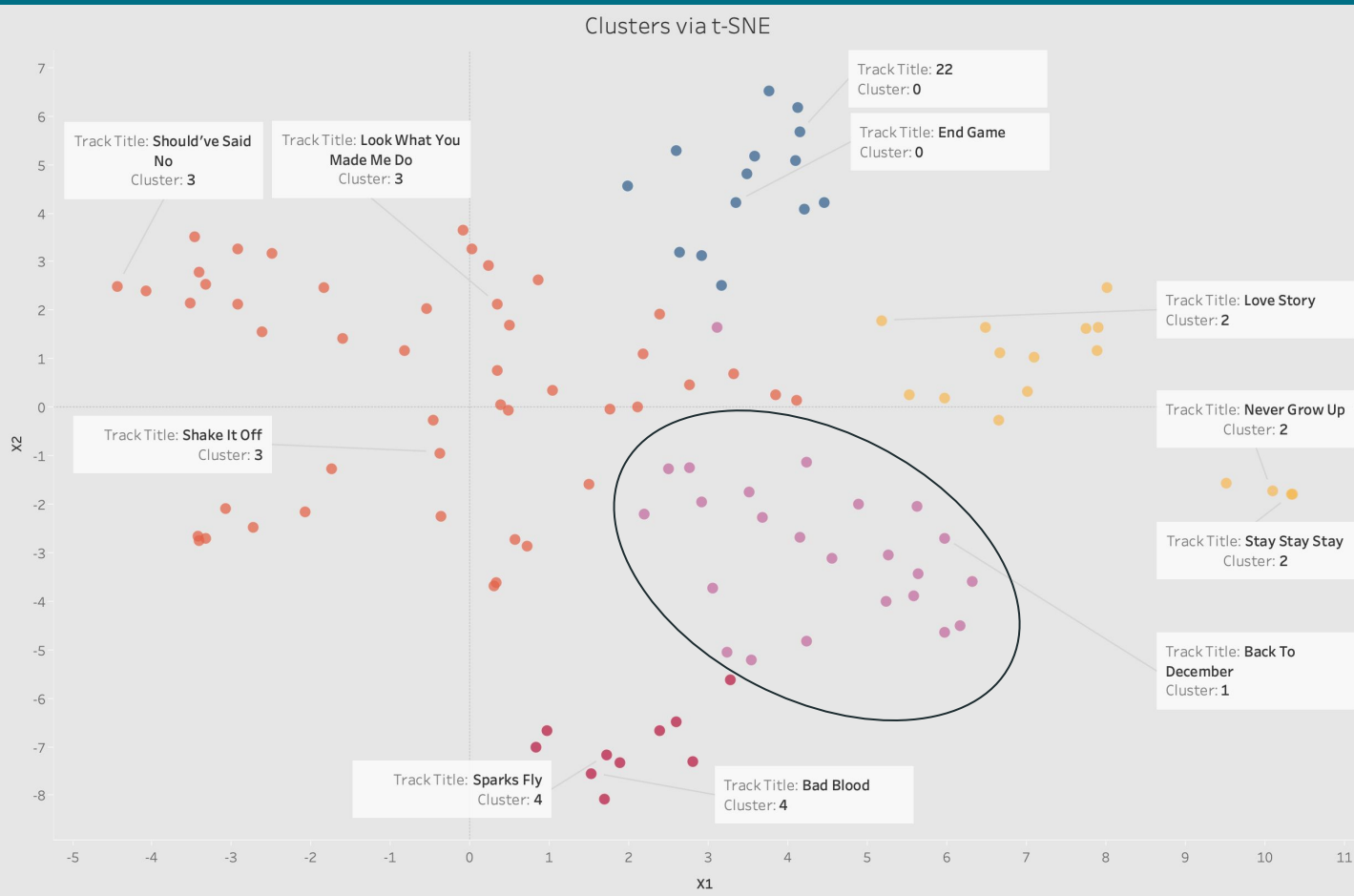


Clusters

- Cluster 1:



- Topic 5 (looking back, sad)
- "Better, time, sorry"

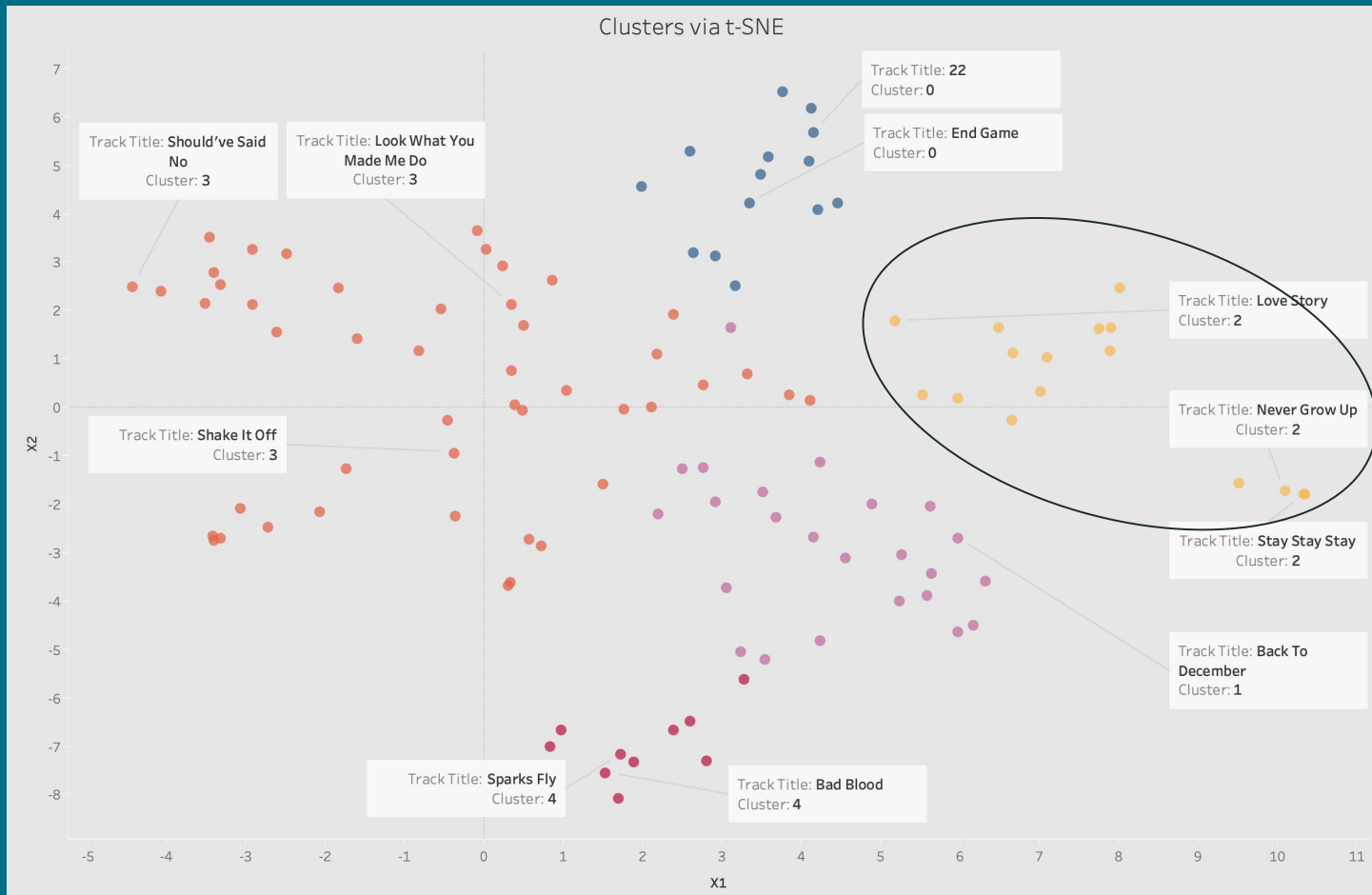


Clusters

Cluster 2:



- Topic 2 (bright and happy)
- “Love, beautiful, lights, life”
- Topic 4 (don’t want to move on, don’t want time to pass)
- “Stay, think, beautiful”



Clusters

Cluster 3:



- Topic 6 (looking back, pondering, some regret)

- “said, think, gone, did, thought, wrong”



- Topic 8 (reflection of the past)

- “good, remember, bad, looking”



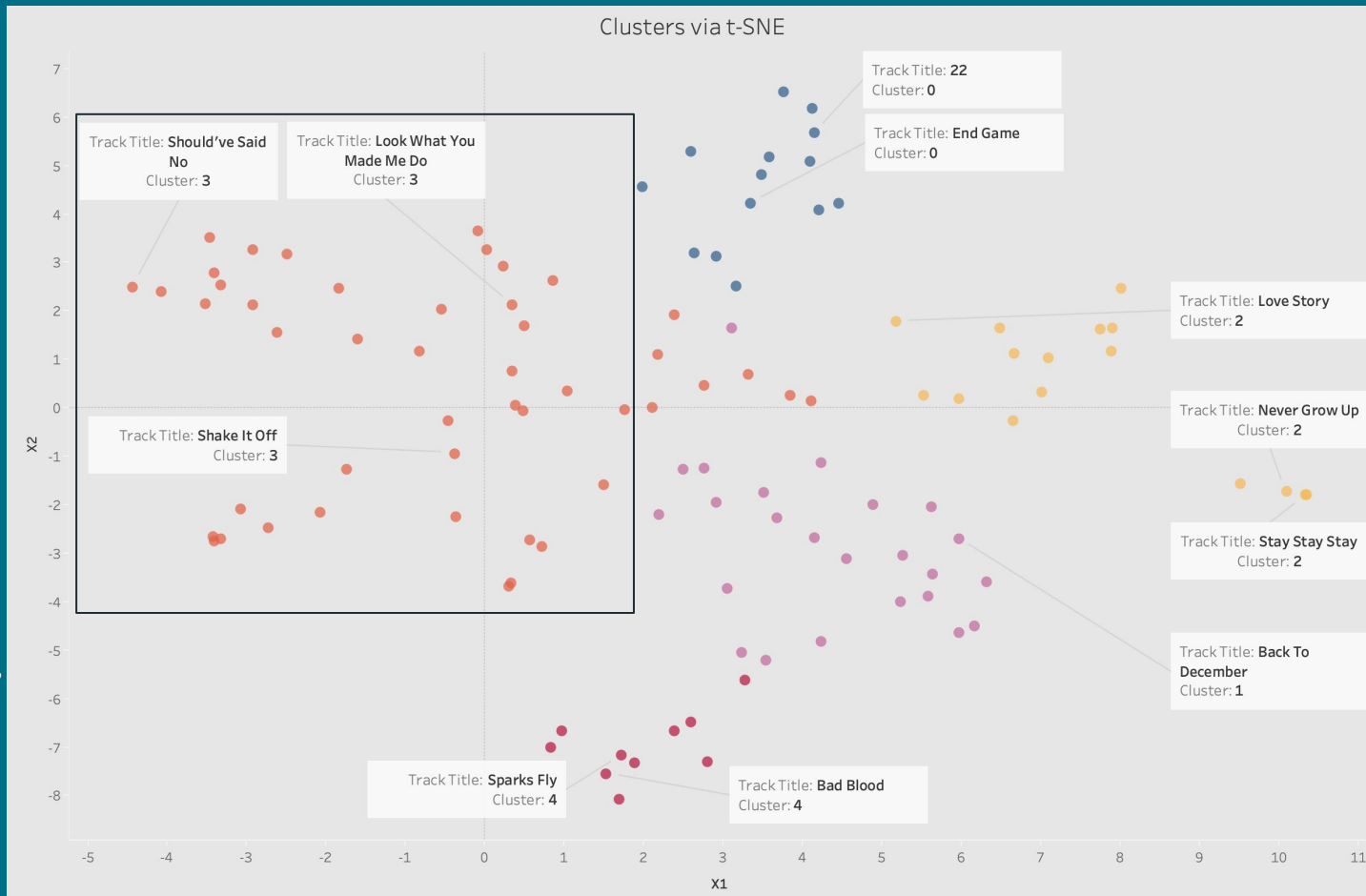
- Topic 7 (new relationship)

- “right, feeling, miss, kiss, new, long, change”

- Topic 0 (permanency, belonging)

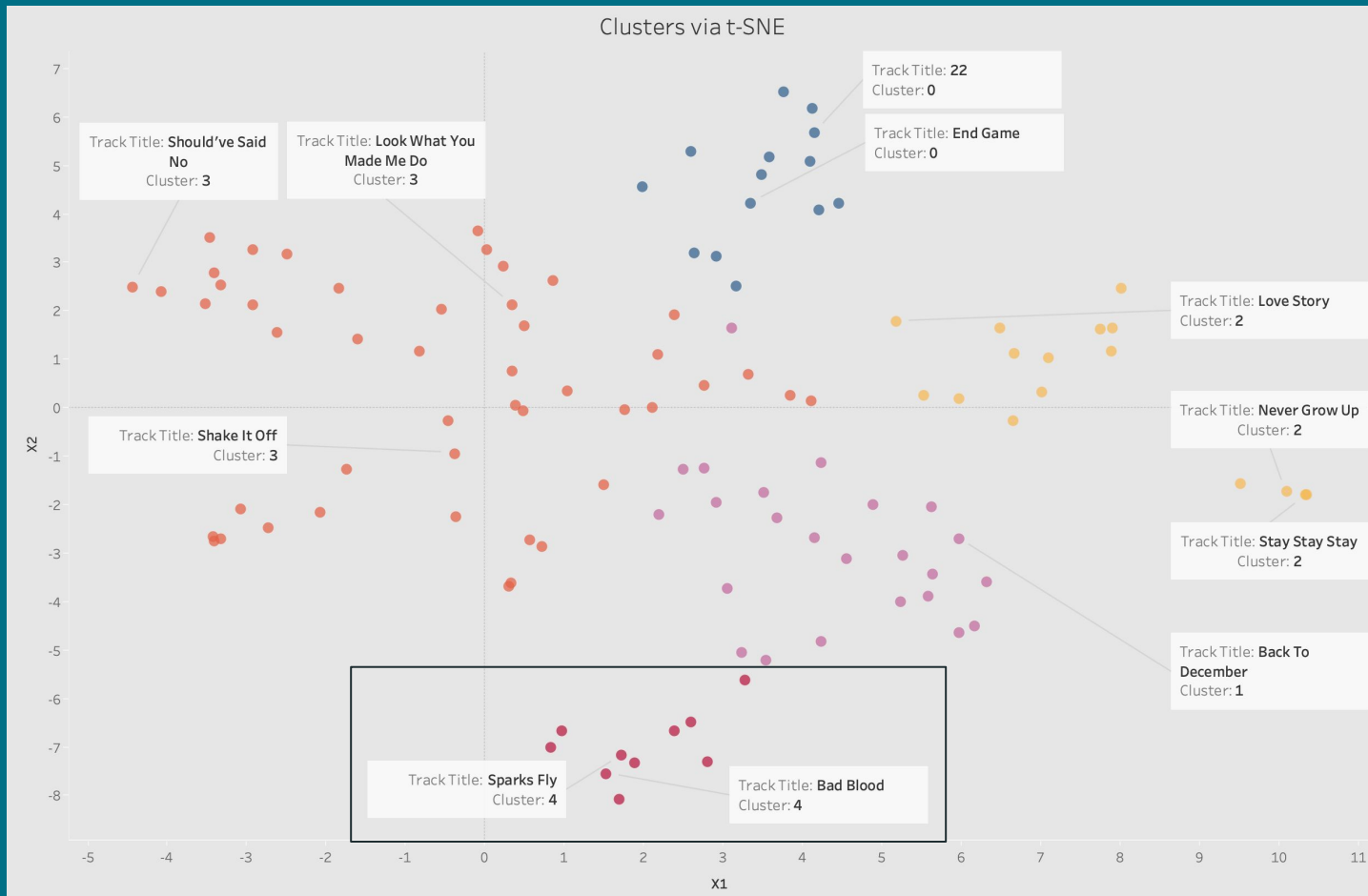


- “home, forever, long, drive, place”

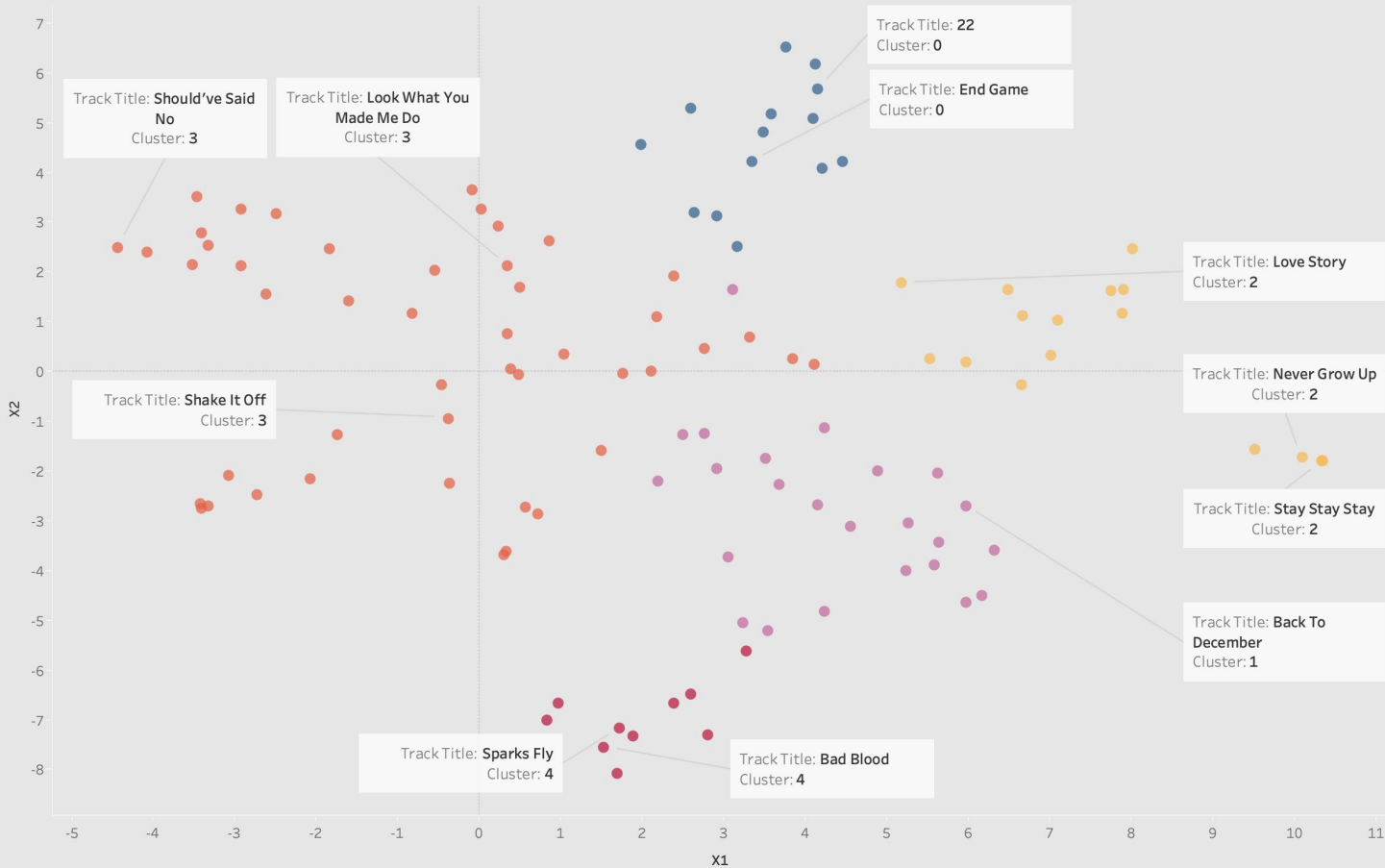


Clusters

- Cluster 4:
 - Topic 1 (Positivity through the bad, empowerment)
 - “bad, smile, won, high, hey, life”



Clusters via t-SNE



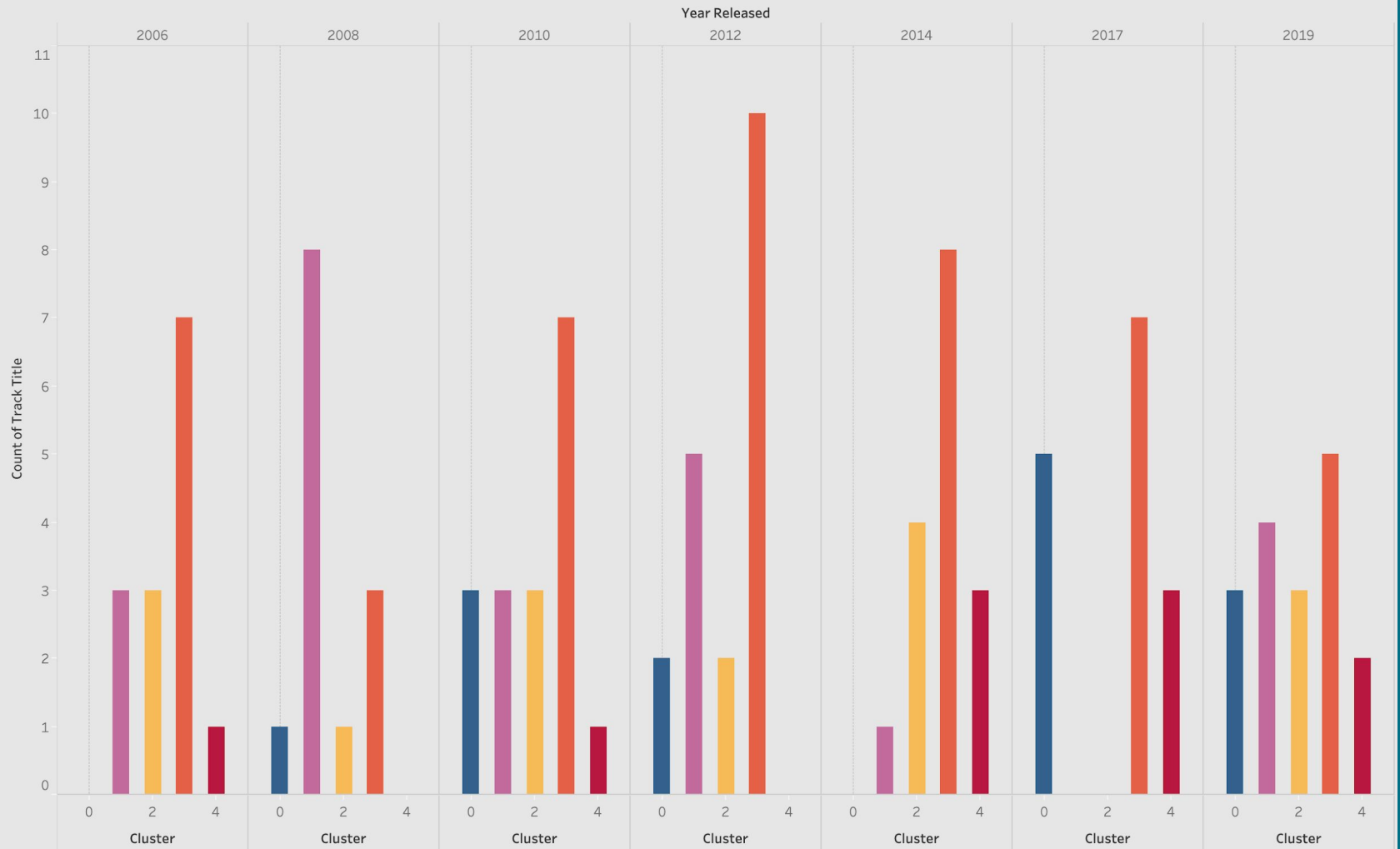
Moving on,
thinking about
future

Positivity,
empowerment,
confidence

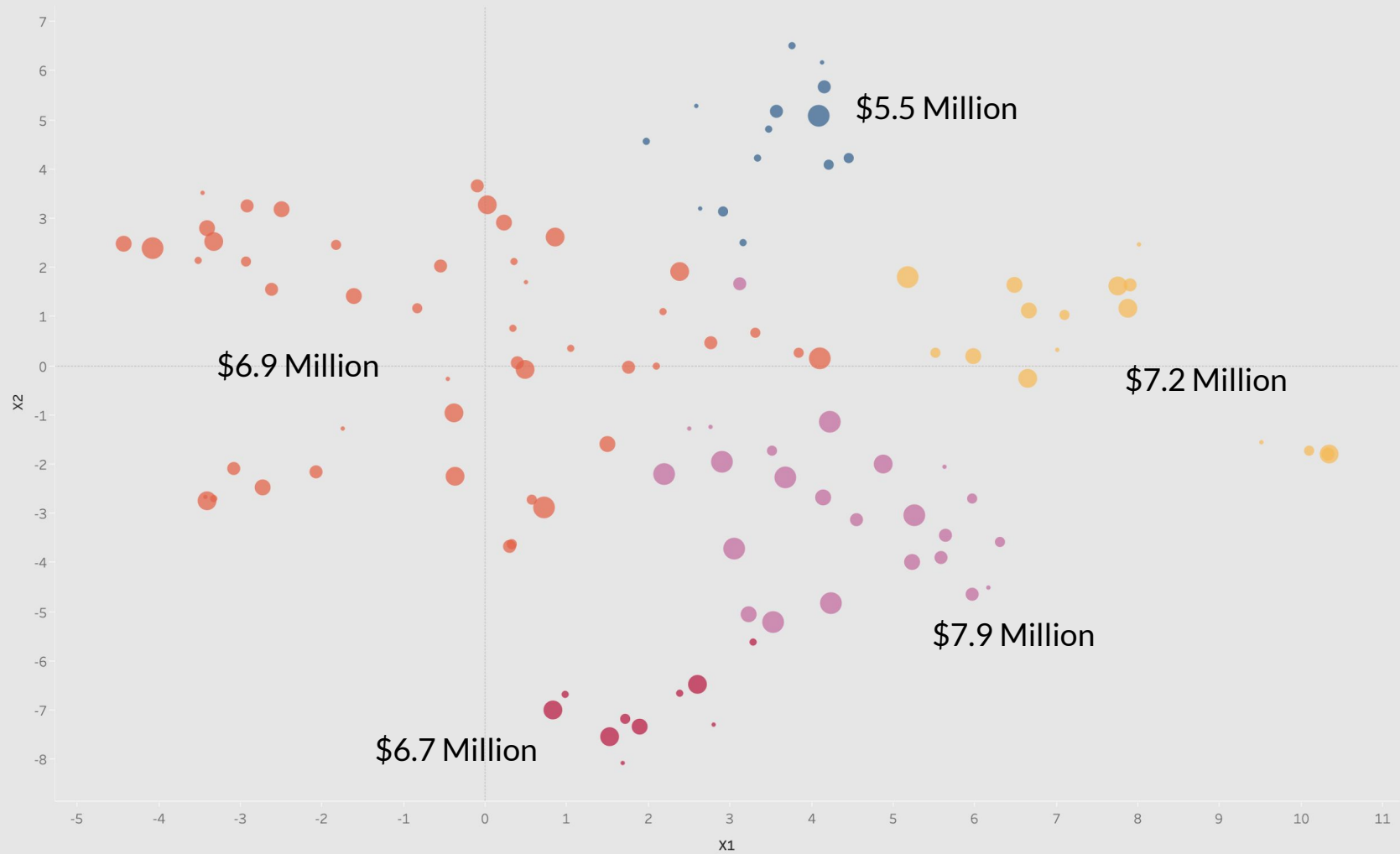
Reflecting on
past, sad/bad
breakups

Crushes,
falling in love

Clusters per Year



Sales World Wide



Takeaways

1 | Taylor Swift's Main Topics

- Moving on, thinking about future
- Positivity & empowerment
- Crushes, falling in love
- Reflecting on the past, sad/bad breakups

2 | How do these topics change over time?

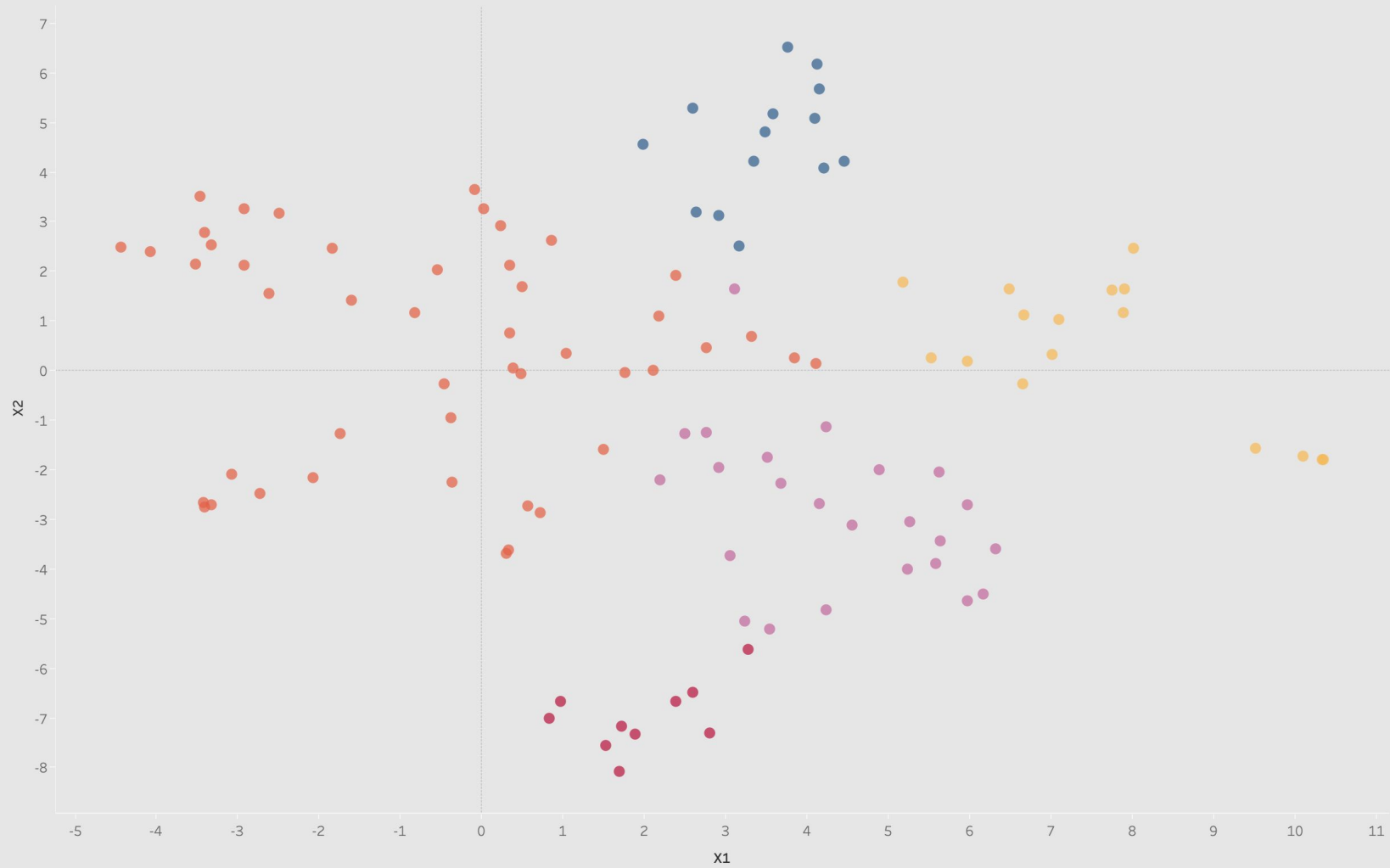
- Cluster 3 has been a steady theme throughout career
 - New relationships, reflection of past
- Clusters 0 and 1 fluctuate
- Other themes stay relatively the same

3 | Which topics are most successful (in terms of World Wide Sales)?

- Pink (cluster 1): most successful
 - Reflection on past, sad
- Blue (cluster 0): least successful
 - Thinking about the future, moving on from past
- Clusters 2-4: similar success

Thank you!

Clusters via t-SNE



Topics



Topic 0: Permanency, belonging

- girl, home, look, forever, long, say, yeah, drive, place, feel, trying, phone, lights, world, fine



Topic 1: Positivity through the bad

- baby, bad, smile, won, aint, really, high, hey, let, life, hand, coming, eyes, new, things



Topic 2: Bright and happy

- love, beautiful, lights, knew, time, life, saw, heart, long, high, right, eyes, little, smile, let



Topic 3: Moving on from the past, thinking about future

- yeah, trying, head, end, best, hands, new, right, feeling, street, waiting, dress, night, blue, bad



Topic 4: Don't want to move on, don't want the time to pass

- stay, little, think, beautiful, right, hand, won, home, hold, hey, getting, light, let, beak, make



Topic 5: Looking back, sad

- better, time, tell, night, sorry, say, looking, best, try, didn't, dreams, aint, let, run, long



Topic 6: Looking back, pondering, some regret

- said, think, gone, did, thought, wrong, things, dress, little, head, didn't, mind, forever, say, rain



Topic 7: New relationship

- come, day, right, feeling, miss, kiss, new, long, forget, feel, need, rain, fall, change, fight



Topic 8: Reflection of the past

- good, remember, bad, coming, looking, break, play, light, say, make, right, room, heart, hey, getting