

Portfolio Milestone Presentation

By Alison Reikher

Introduction

- IST 659: Database Administration
- IST 652: Scripting for Data Analysis
- IST 707: Applied Machine Learning



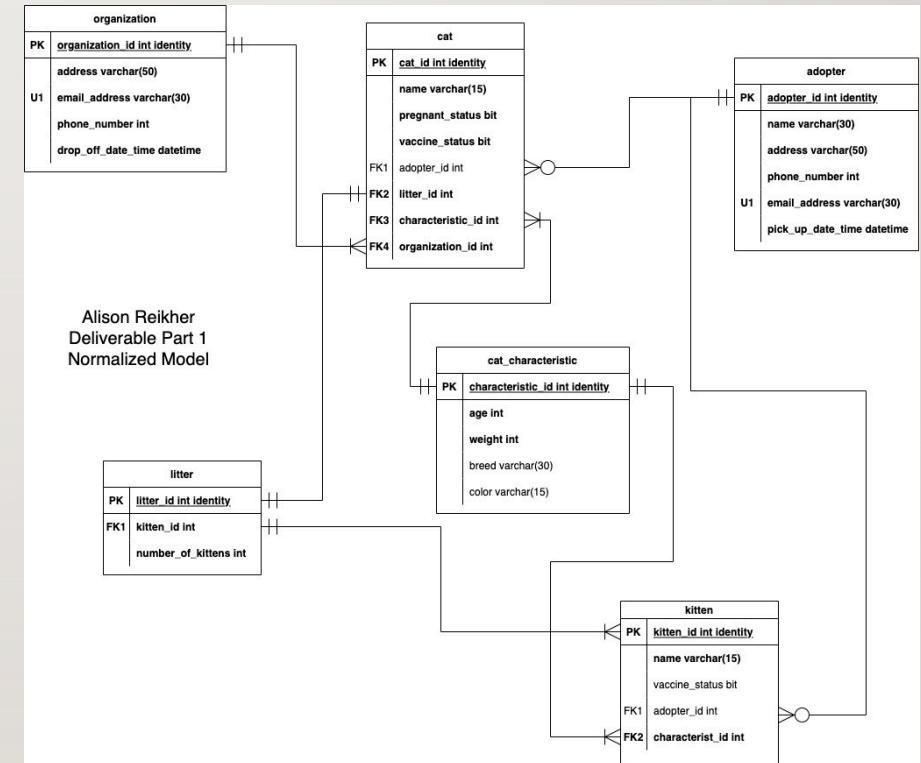
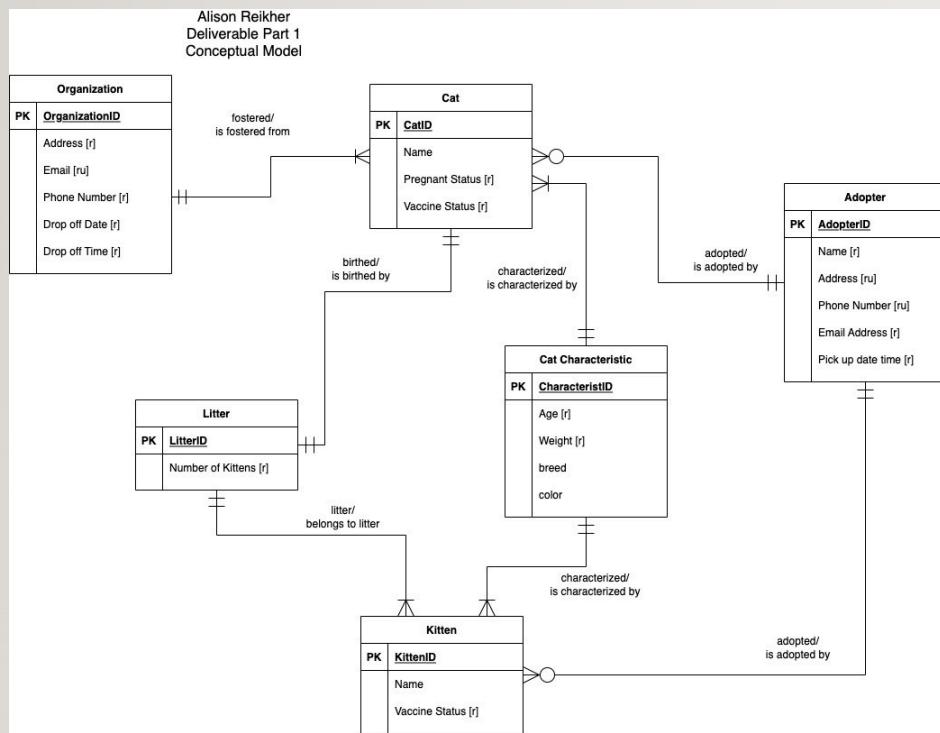
IST 659: Database Administration



- Foster cat and kitten database
- 6 table database:
 - Organization
 - Cat
 - Litter
 - Kitten
 - Cat Characteristics
 - Adopter



Conceptual And Normalized Models



Data Questions

- How many cats are there in total?
- How many kittens are there in total?
- How many cats come unvaccinated?
- How many kittens need to be vaccinated?
- Which cats have been adopted?
- Which kittens have been adopted?
- How many of each type of breed are there?
- Which cats are available for adoption?
- Which kittens are available for adoption?



Sample of Answered Questions

- How many cats are there in total?

NumberOfCats	
1	5

- Which cats have been adopted?

Results		Messages
	CatName	OwnerName
1	Cristabel	Royall Dummett
2	Leshia	Ardeen Seeger
3	Maybelle	Susi Pennazzi
4	Millie	Pate Percival

- Which kittens need to be vaccinated?

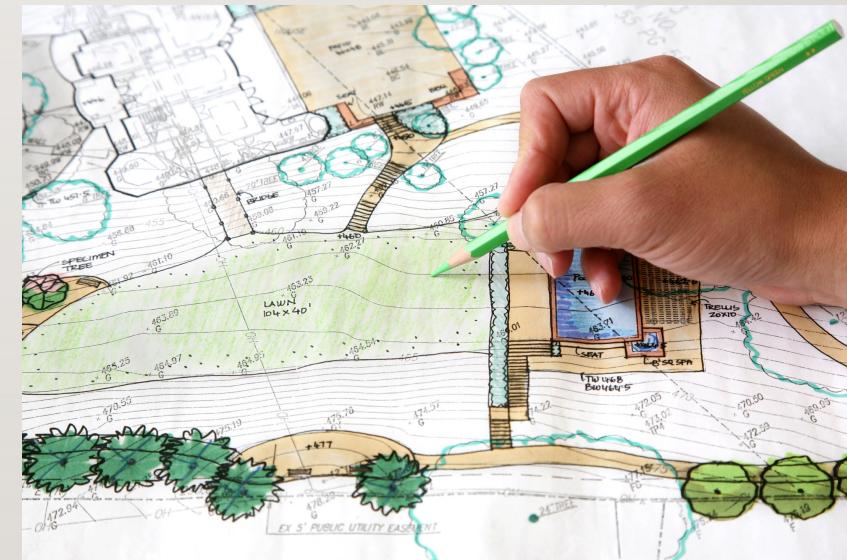
Results		Messages
	name	
1	Cris	
2	Nickolas	
3	Cindy	

- Which cats are available for adoption?

Results		Messages
	name	
1	Belicia	

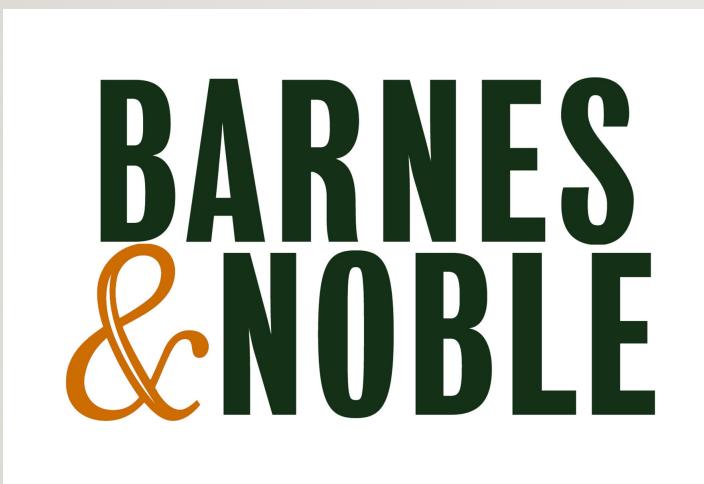
Learning Goals

- Collect and organize data
- Develop a plan of action to implement the business decisions derived from the analyses.



IST 652: Scripting for Data Analytics

- Analyzed differences between Barnes and Nobles and Amazon reviews for banned books



Data Questions

- Do users rate books differently on different websites?
- Are there any predominant book genres in our data set?
- Are there any strong correlation between any variables in either data set?
- What are the differences between the Amazon reviews and the Barnes and Noble reviews?

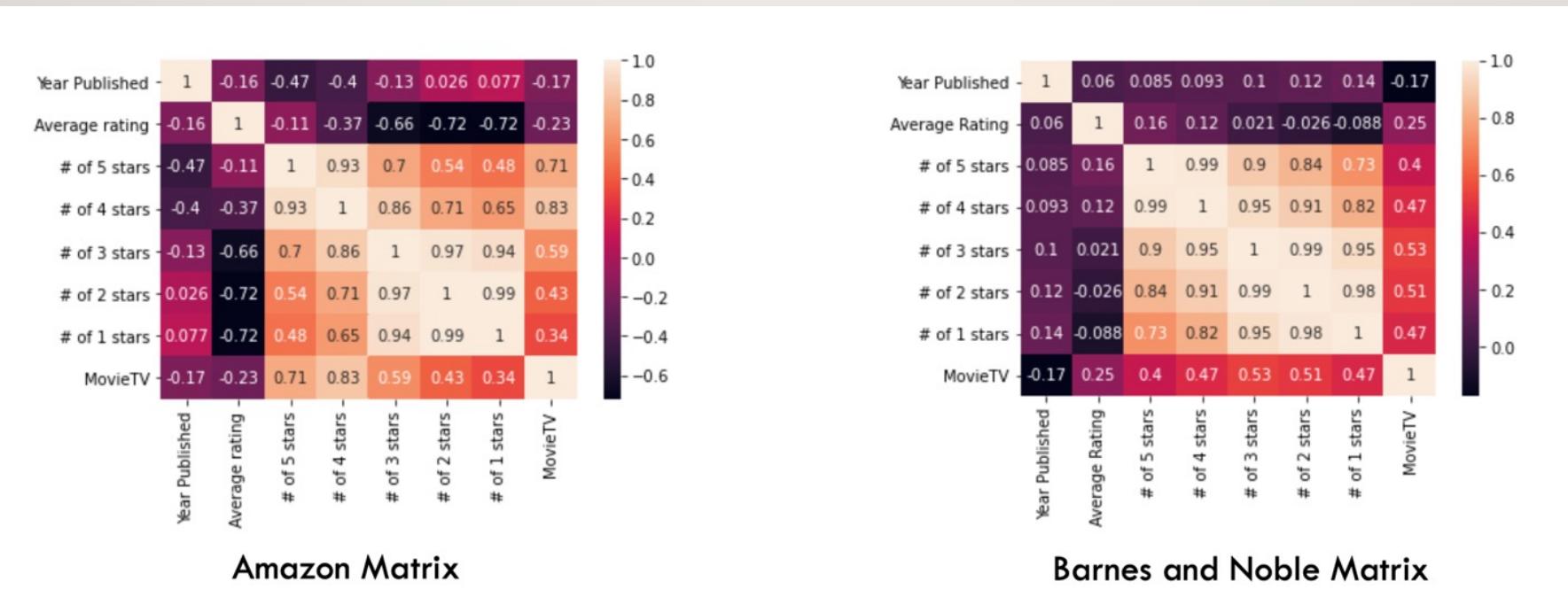


Data Answers

- Do users rate books differently on different websites?
- Amazon's ratings average 4.64 out of 5 and Barnes and Nobles' ratings average 4.6 out of 5
- Are there any predominant book genres in our data set?
- Young Adult Fiction: 6 times
- Children's Literature: 3 times
- Graphic Novel: 3 times

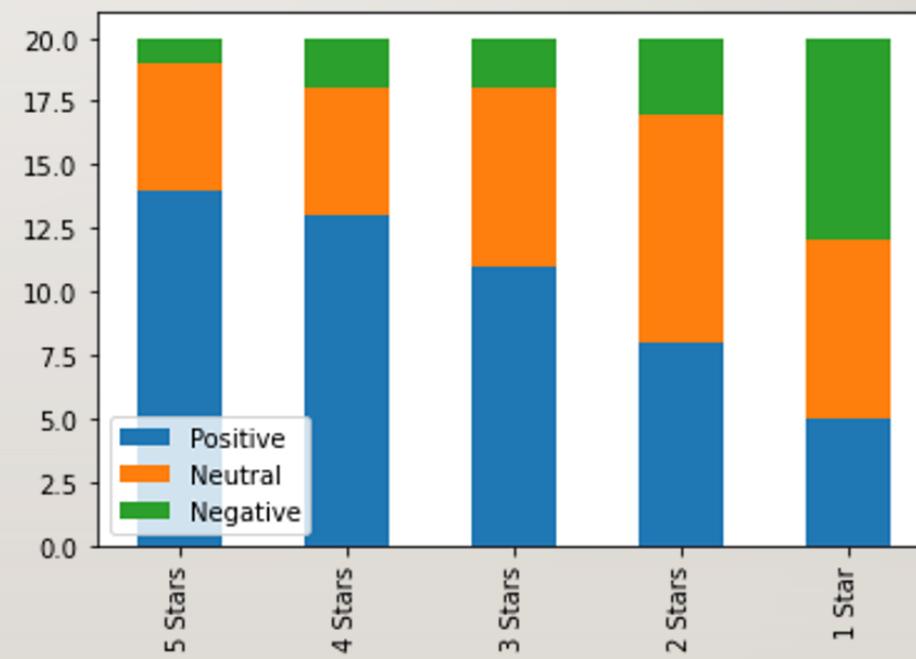
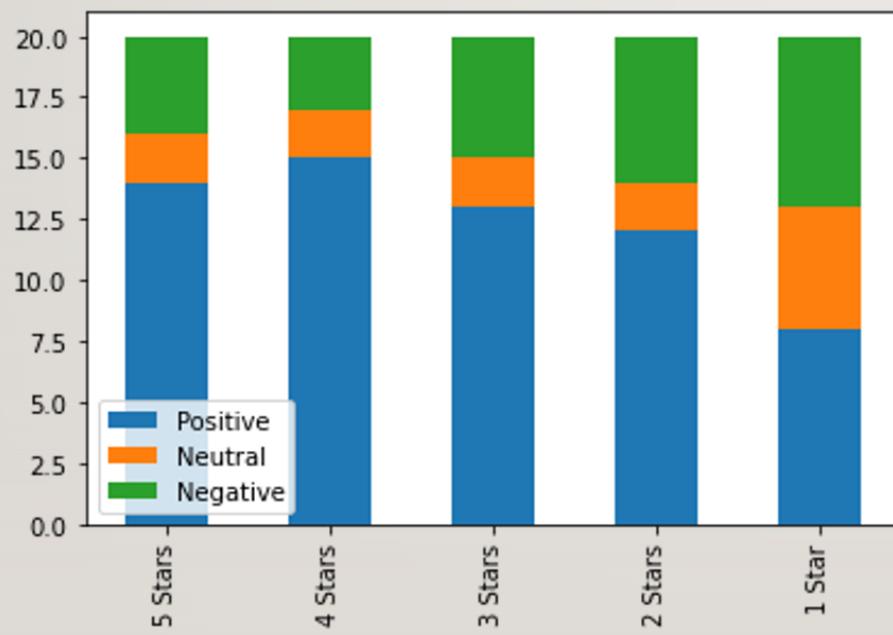
Data Answers (cont.)

- Are there any strong correlations between any variables in either data set?



Data Answers (cont.)

- What are the differences between the Amazon reviews and the Barnes and Noble reviews?

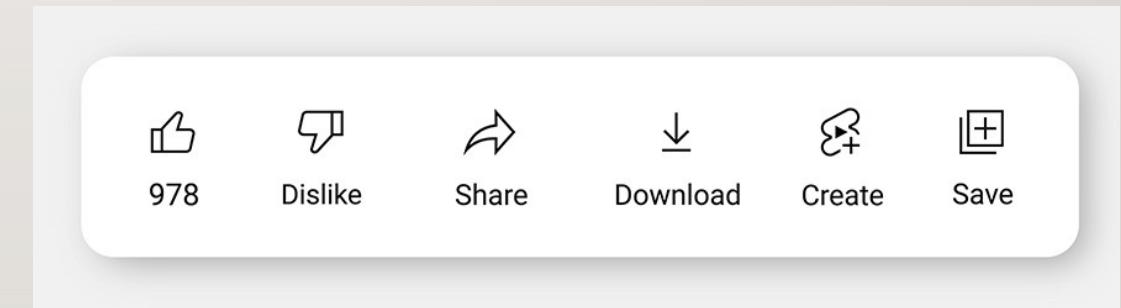


Learning Goals

- Describe a broad overview of the major practice areas in data science.
- Collect and organize data.
- Identify patterns in data via visualization, statistical analysis, and data mining.
- Demonstrate communication skills regarding data and its analysis for managers, IT professionals, programmers, statisticians, and other relevant professionals in their organization.
- Synthesize the ethical dimensions of data science practice (e.g., privacy).

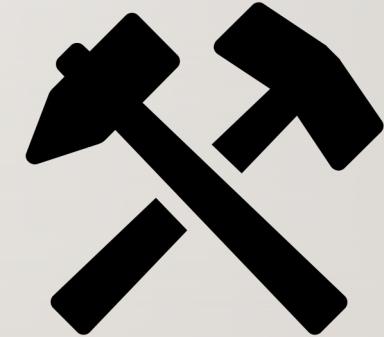
IST 707:Applied Machine Learning

- YouTube Explore Page analysis
- 3 machine learning algorithms:
 - Associative Rule Mining
 - Sentiment Analysis
 - Correlation Matrices

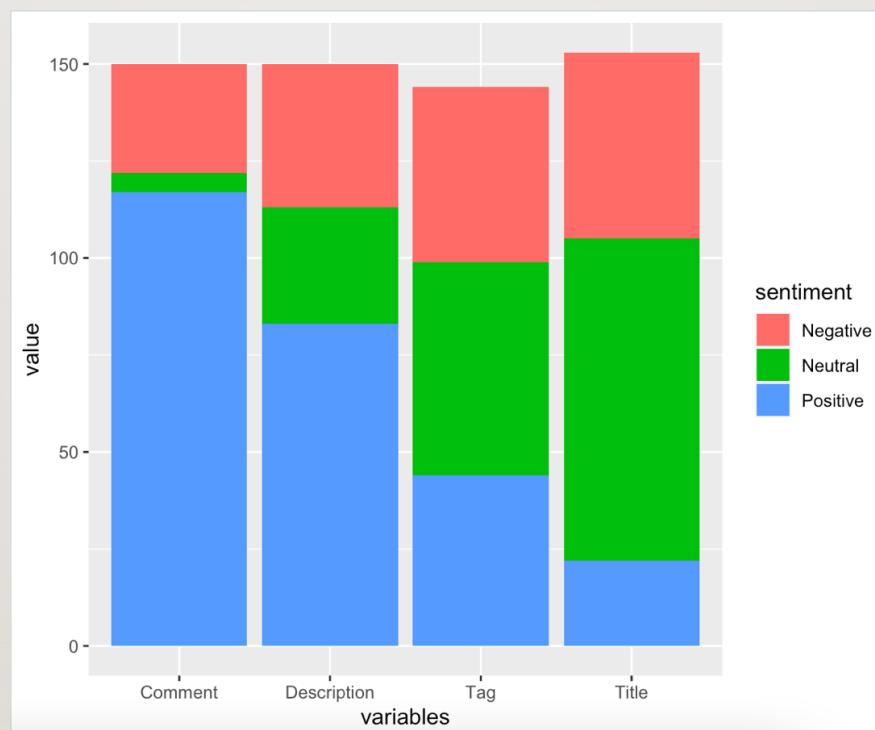


Associative Rule Mining

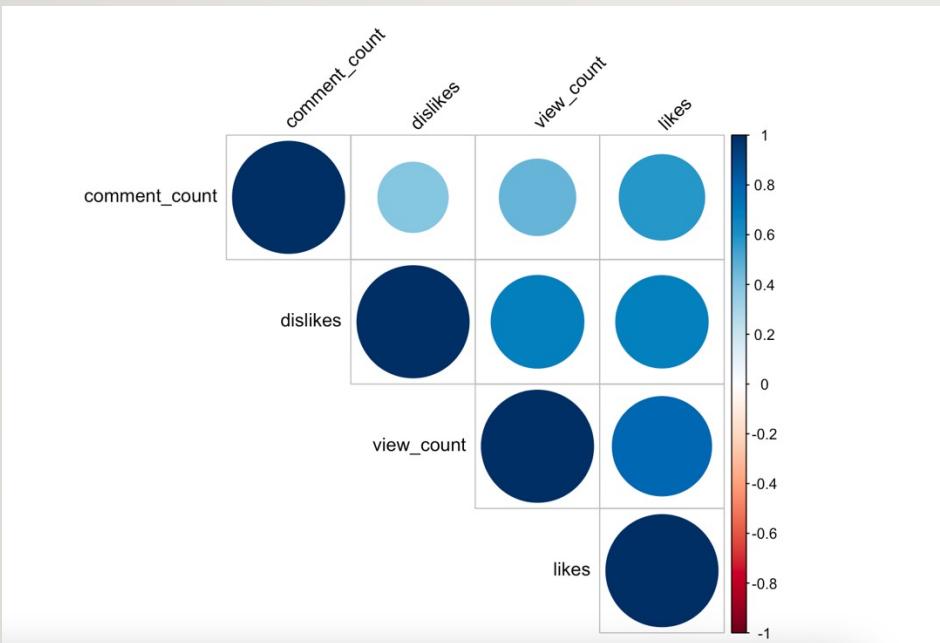
- $\{view_count=[2.55e+06, 1.32e+09], dislikes=[1.63e+03, 2.4e+06], comment_count=[4.38e+03, 1.61e+07]\} \Rightarrow \{likes=[8.78e+04, 3.18e+07]\}$
 - Support: 0.1917400, Confidence: 0.9379102, Lift: 2.813580
- $\{channel_title=Sky\ Sports\ Football\} \Rightarrow \{likes=[22, 2e+04]\}$
 - Support: 0.01199549, Confidence: 0.8386492, Lift: 2.516218
- $\{channel_title=Sky\ Sports\ Football\} \Rightarrow \{dislikes=[3, 404]\}$
 - Support: 0.01148562, Confidence: 0.8030019, Lift: 2.412956



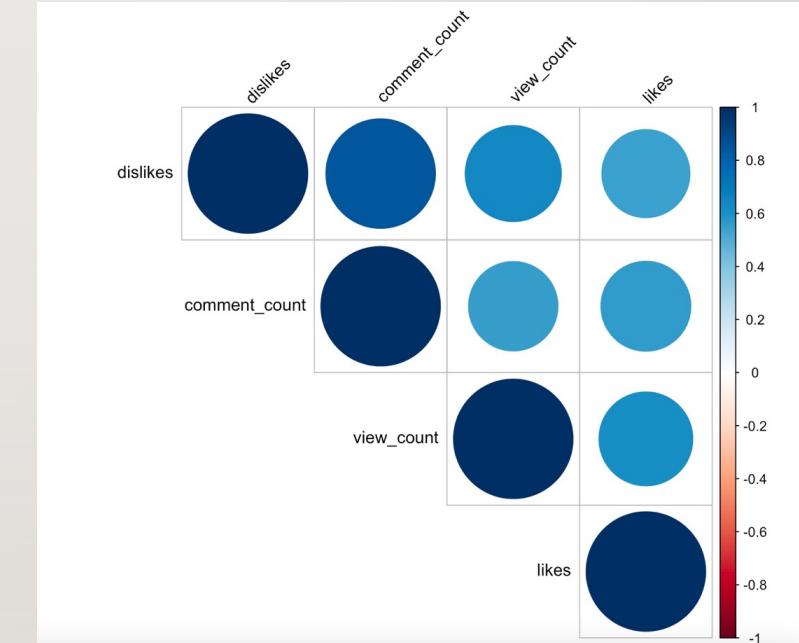
Sentiment Analysis



Correlation Analysis



Full Dataframe



Dislikes Dataframe

Learning Goals

- Describe a broad overview of the major practice areas in data science.
- Develop alternative strategies based on the data.
- Demonstrate communication skills regarding data and its analysis for managers, IT professionals, programmers, statisticians, and other relevant professionals in their organization.

Conclusion

- IST 659: Database Administration
 - Cat database
- IST 652: Scripting for Data Analysis
 - Banned book project
- IST 707: Applied Machine Learning
 - YouTube project



References

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- All remaining images are Stock Images from PowerPoint or my own

Thank You for watching!
