

Batman Themes

Text Mining Screenplays from
Burton and Nolan

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Introduction

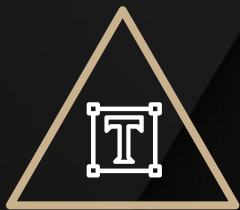
About: My journey to data science

Motivation: What language in the Batman films makes them characteristic, unique?

Goal: Draw out themes common among the films by exploring screenplay dialogue



Methodology



Data

Five Batman film
screenplays



Model

NMF with
TfidfVectorizer



Tools

NLTK, scikit-learn,
matplotlib, seaborn

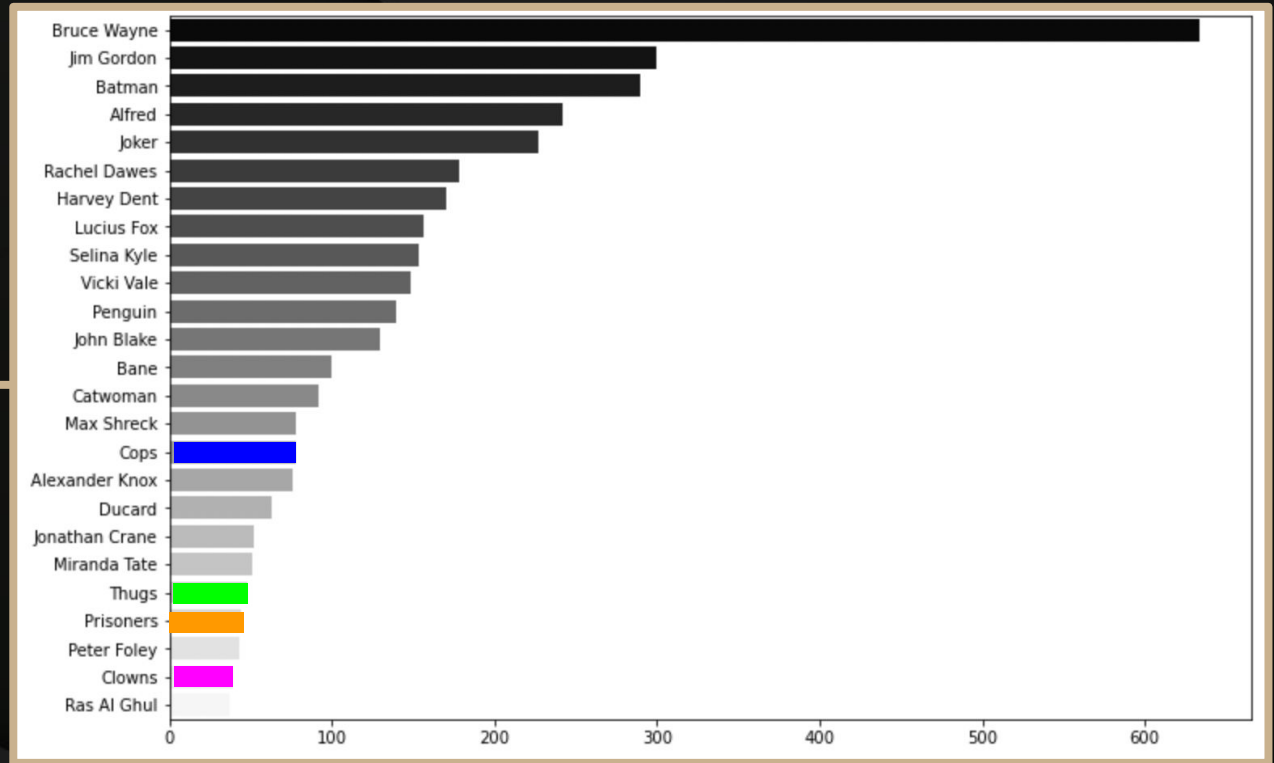


“Nobody panics when things go
according to plan.”

—Joker, *The Dark Knight*

Results

Number of
Lines Spoken
by the Top 25
Characters



Results

Burton words

Nolan words



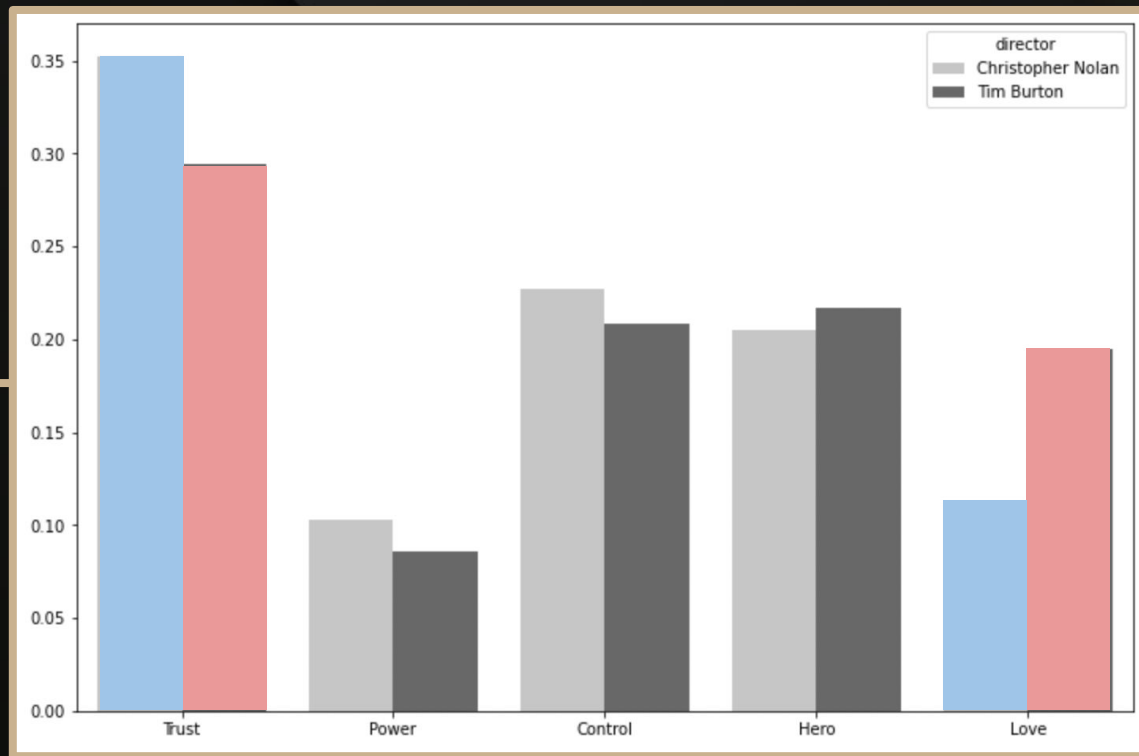
Results

Top 5 Words
from Selected
Topics

Trust	sorry	money	trust	friend	listen
Power	master	pushup	point	fall	swing
Control	die	city	stop	wait	control
Hero	right	hero	mother	kick	open
Love	love	life	rest	spend	world

Differences Between Directors

Percent of
Scenes by
Topic For
Each Director





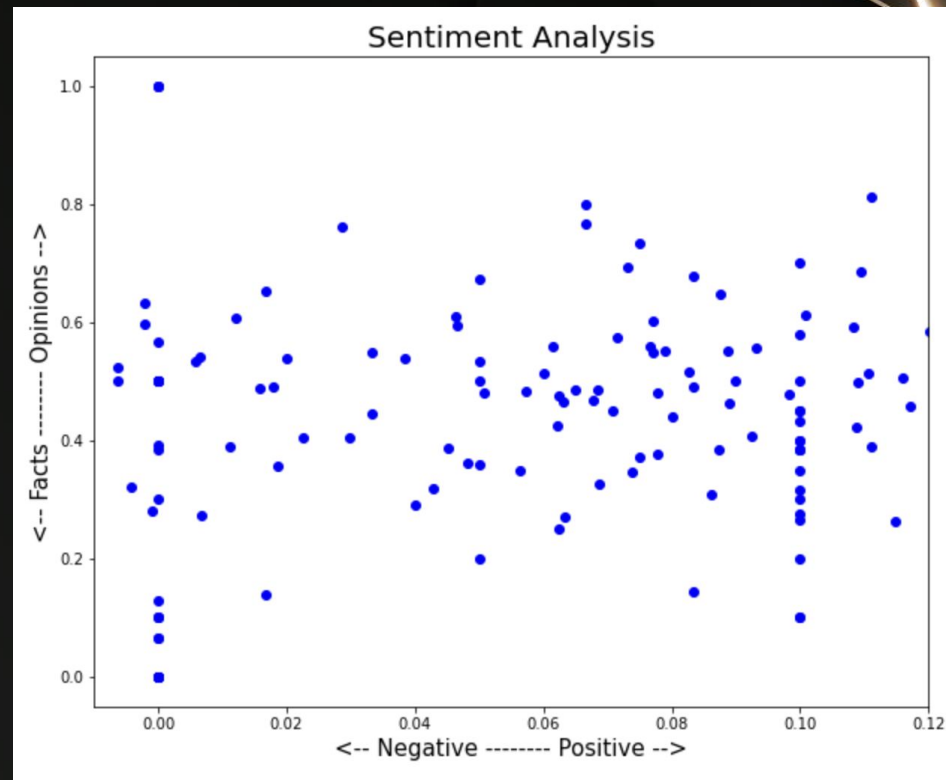
Summary and Impact

- ▲ Developed a model to analyze themes characteristic of Batman
- ▲ Compared topics between films
- ▲ Creatives can explore themes unique to Batman or develop new ones

Appendix



Sentiment Analysis of Negative Versus Positive Language



Appendix



Topic 0 Probability Across Batman Movie Scenes

