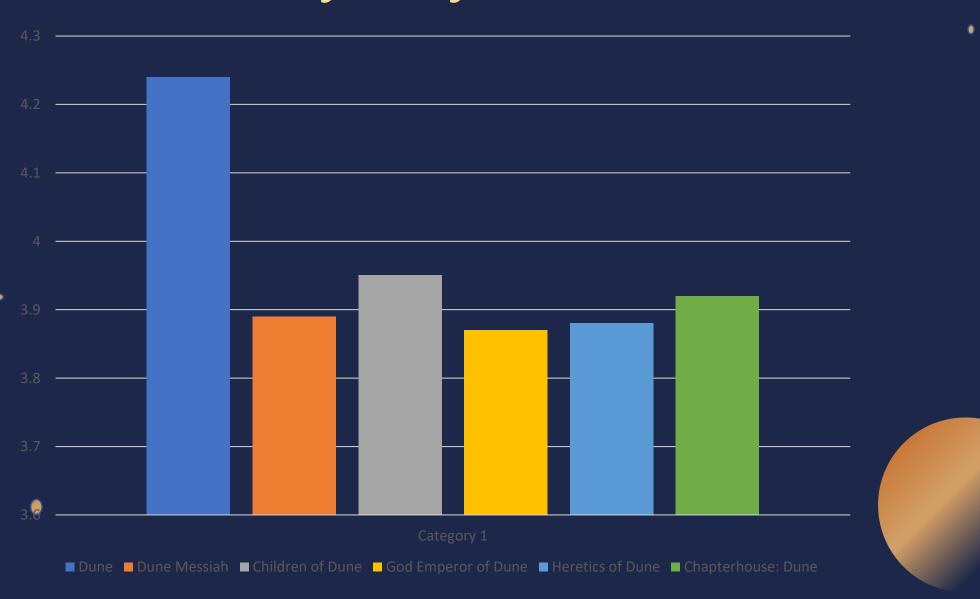


introduction

Dune: the foundation of modern sci-fi

ratings on goodreads



question

Can we model thematic exploration across books?

Can topic trends over books explain book ratings?

data and preprocessing

Dune e-book PDF's

Splitting of chapters into docs

Removal of pre chapter quotes/general cleaning

Stop-word removal/lemmatization

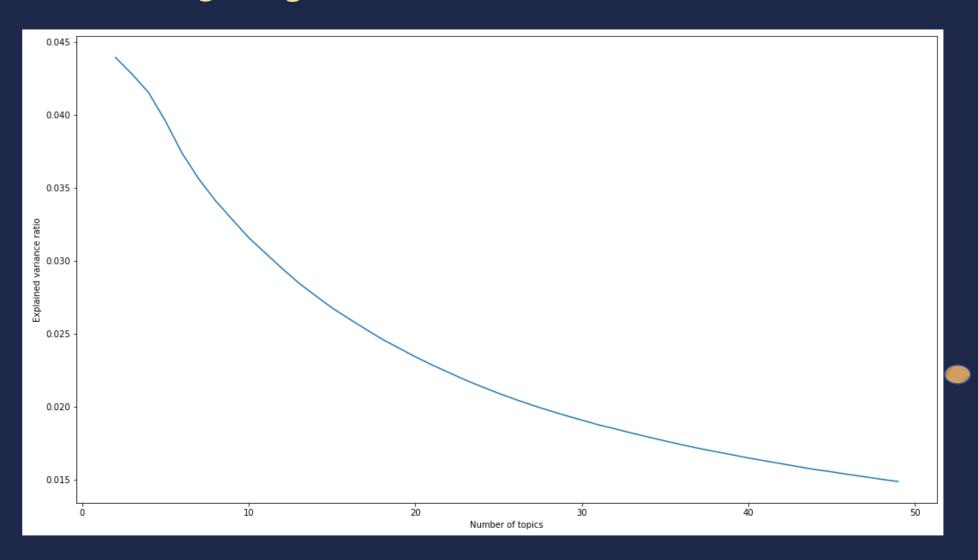
model evaluation

Qualitative

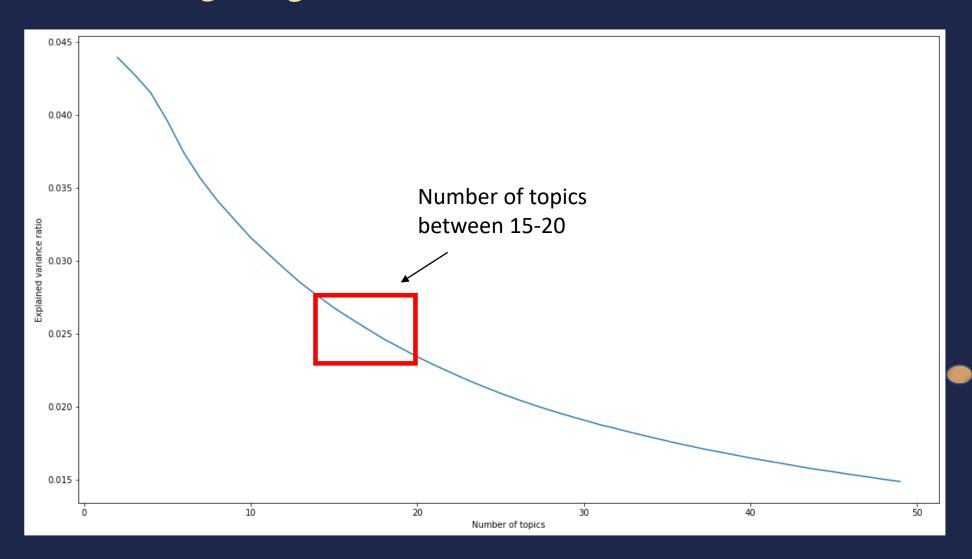
Intuition eyetest Quantitative

Topic coherence

tuning hyper-parameters

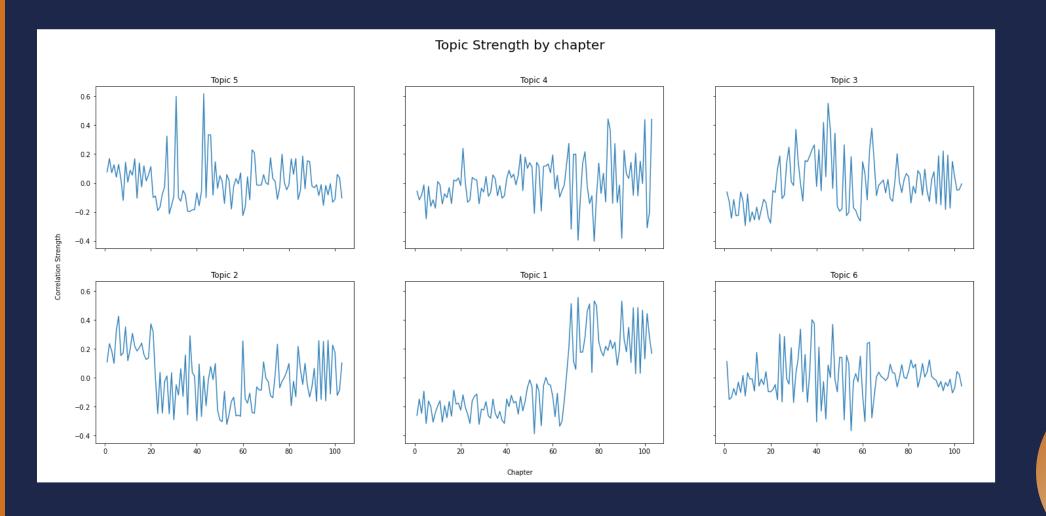


tuning hyper-parameters



- Settle on number of topics = 20
- Average
 explained
 variance =
 2.3%

vis slides here



Top 6 topics by prevalence

- 1. God Emperor Leto II
- 2. Paul and Life in the Desert
- 3. House Corrino on Salusa Secundus
- 4. Emperor Leto II's Court
- 5. Farad and the Preacher
- 6. Paul as the Preacher

insights

- Topics that explain most variance are book-plot tied
- Books that are most plot-driven and related to Paul and Jessica are highest rated

future work

- Topic modeling by punctuation use
- Focus more on order of words

THANK YOU

appendix

Initial modeling:

```
Topic: ' Paul and Jessica in desert
said, paul, jessica, stilgar, baron, duke, thought, hawat, chani, gurney, mother, ll, man, fremen, ve, kynes, yueh, water, san
d, saw
Topic: ' Harkonnens and imperial politics '
baron, feyd, piter, hawat, rautha, nefud, lord, emperor, duke, yueh, rabban, sardaukar, uncle, leto, nephew, mentat, count, ah,
fenring, said
Topic: ' House Atreides on Dune '
duke, hawat, yueh, kynes, halleck, table, leto, sire, room, father, idaho, tuek, mapes, thufir, harkonnens, fremen, 11, men, do
Topic: ' Atreides and the Fremen '
gurney, paul, stilgar, halleck, hawat, fremen, kynes, men, sardaukar, duke, sire, lord, feyd, worm, rautha, man, fedaykin, equi
pment, storm, sand
Topic: ' Palace intrigue '
yueh, paul, stilgar, tooth, book, jamis, gurney, leto, ring, wanna, sardaukar, house, ll, tattoo, read, hall, filmbook, seeker,
room, diamond
Topic: ' Desert ecosystem '
kynes, sand, yueh, paul, tent, pack, lump, desert, piter, worm, baron, father, rock, fissure, thopter, surface, worms, storm, h
ole, lecturing
Topic: ' Paul
paul, feyd, gurney, rautha, mother, old, reverend, emperor, tent, woman, seeker, haderach, kwisatz, box, pain, bene, gesserit,
count, choam, slave
Topic: ' Desert adventure
hawat, sand, lump, tent, pack, rock, cliff, fremen, mapes, seeker, fissure, basin, night, stars, thumper, room, dunes, sound, f
oam, filter
Topic: 'Sietch Tabr'
alia, harah, baron, sardaukar, emperor, tent, sand, mother, reverend, rabban, tharthar, child, fremen, chani, piter, hangings,
sietch, old, son, woman
Topic: ' Jessica and the Harkonnens '
piter, jessica, gurney, czigo, jamis, baron, duke, scarface, paul, kinet, leto, litter, lord, stilgar, pilot, banker, woman, vo
ice, knife, mentat
```