Wholesome Possum

NLP Analysis of

By Tom Leung

What is Animal Crossing?

- Released on March 20, 2020

- 5th installment of Animal Crossing

- Fish, catch bugs, gardening
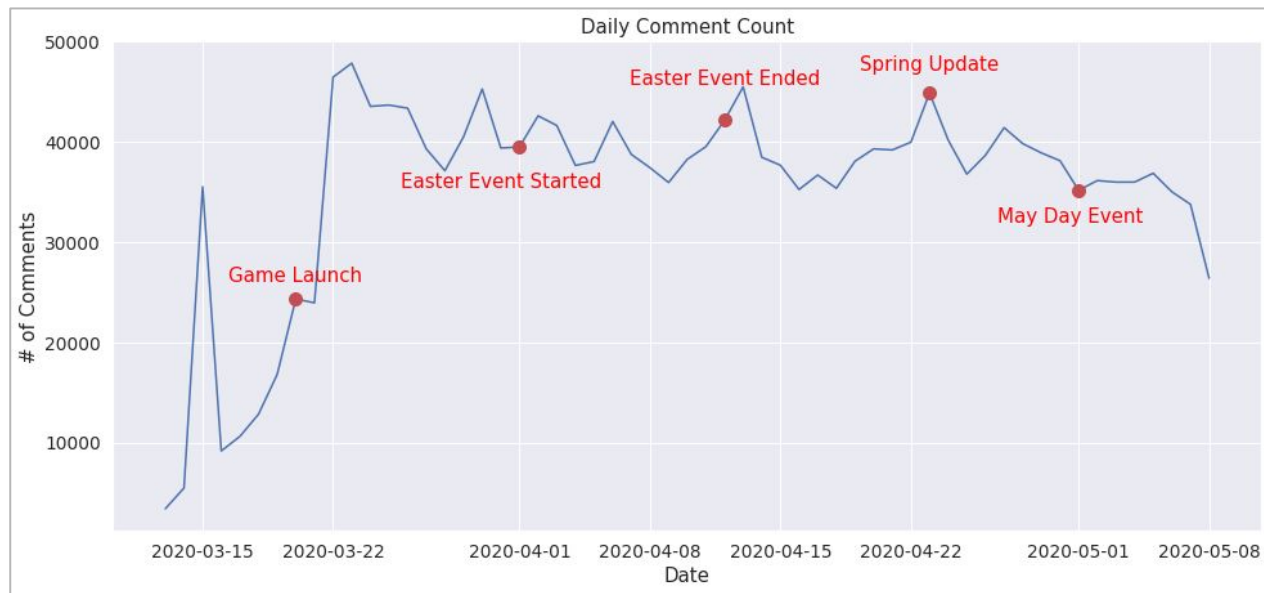
- Social simulation; Zen-like

The Questions

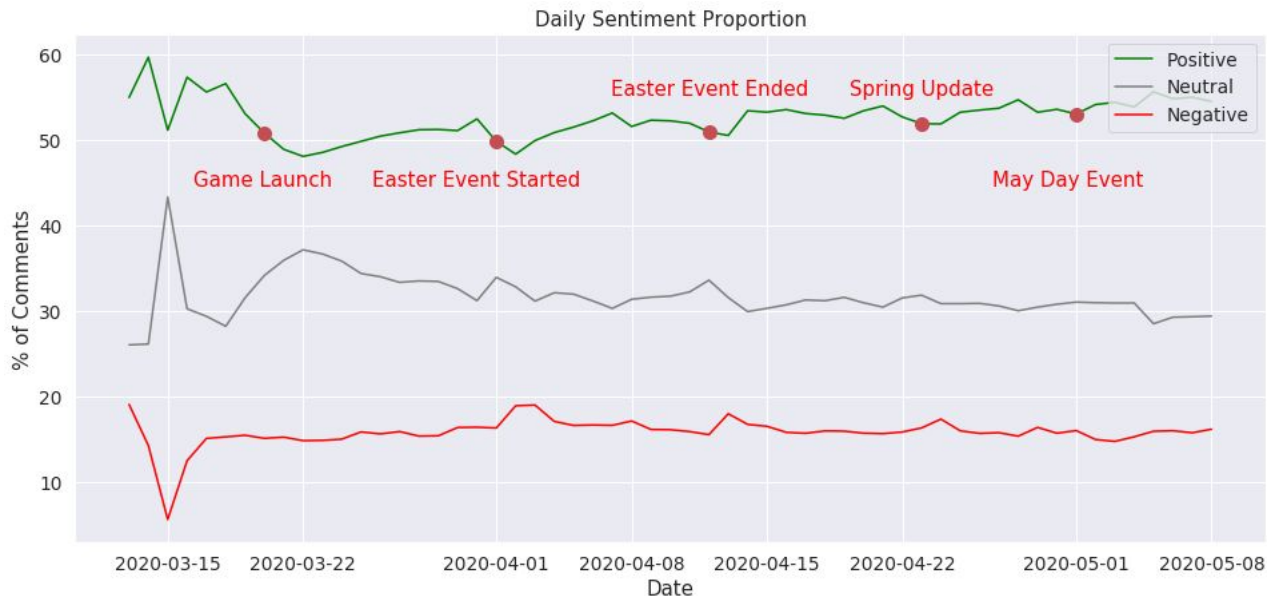- How wholesome is the community?
- What are the hot topics?

Data

- ~2 million text comments from /r/animalcrossing
  - Preprocessed & cleaned
  - Removed links, friend codes
- Mar 13, 2020 to May 10, 2020
- ~40k comments daily

Daily Comment Count

Sentiment Trend

- Labeled with VADER sentiment tool
- Mostly positive to neutral
- Negative sentiment never exceeded 20%

Daily Sentiment Proportion

Easter Event Ended   Spring Update

Game Launch   Easter Event Started   May Day Event

Positive
Neutral
Negative

% of Comments

2020-03-15 2020-03-22 2020-04-01 2020-04-08 2020-04-15 2020-04-22 2020-05-01 2020-05-08

Date

Topic Modeling

NMF Method

Villager

- Topic #0: villager day time game move want first new think sure
- Topic #1: thank much oh awesome okay ok ah lt know great
- Topic #2: thanks much ok oh awesome know okay info cool ah
- Topic #3: dm code dodo please send sent looking pm friend interested
- Topic #4: love would much come visit cute omg idea amazing see
- Topic #5: yes please omg oh ah lol say need haha move
- Topic #6: island come fruit visit need looking anyone cherry flower nook
- Topic #7: like look lol would know good nice really oh cute
- Topic #8: one got make need recipe first two per caught craft
- Topic #9: get recipe trying rid nook way diy mile star item

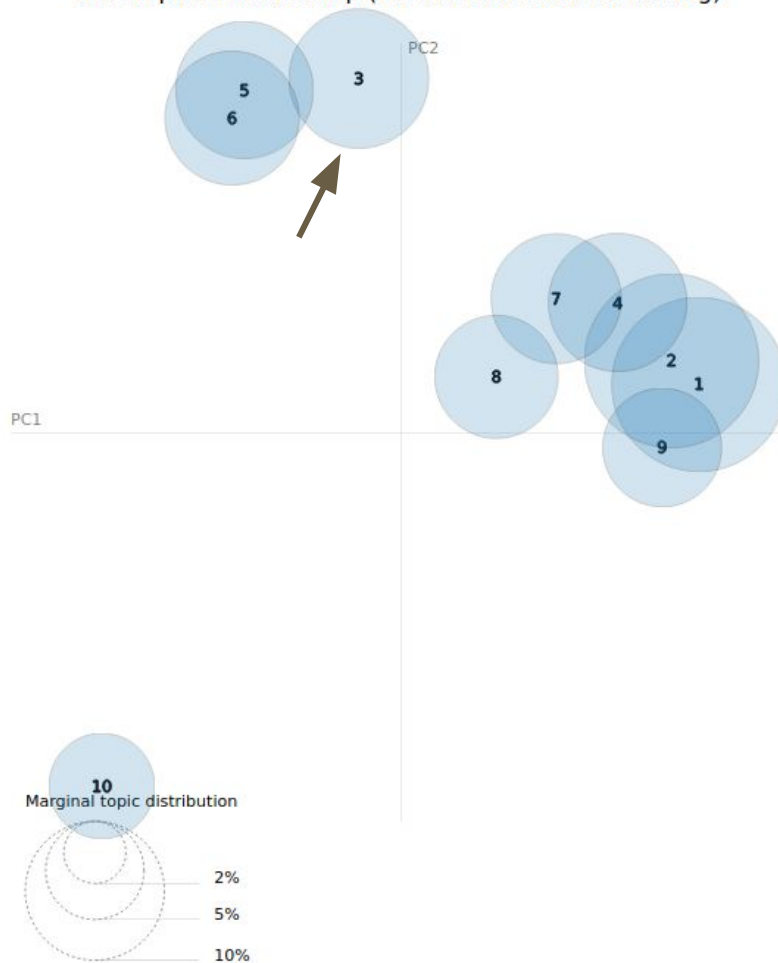**Compliments**

Friend Code

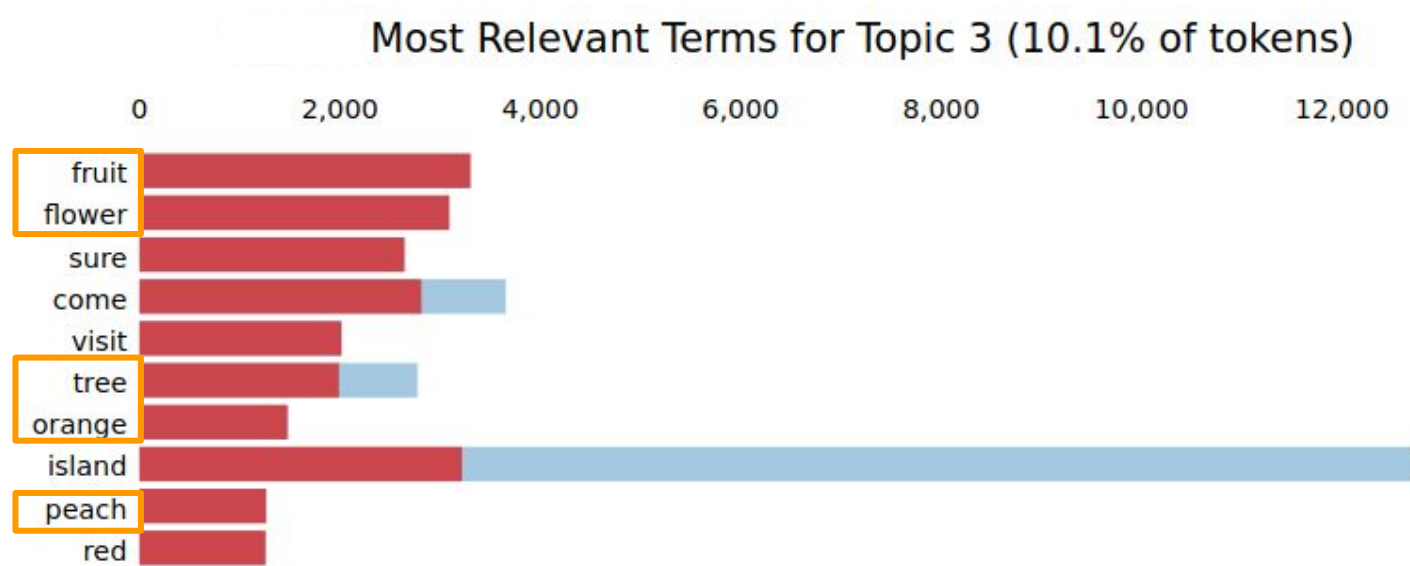**Fruit / Flower**

Recipe

LDA Method

- LDA allows for an interactive visualization
- Bubble = Topic
- Size = Prevalence
- Distance = Similarity
- Zoom into topic 3

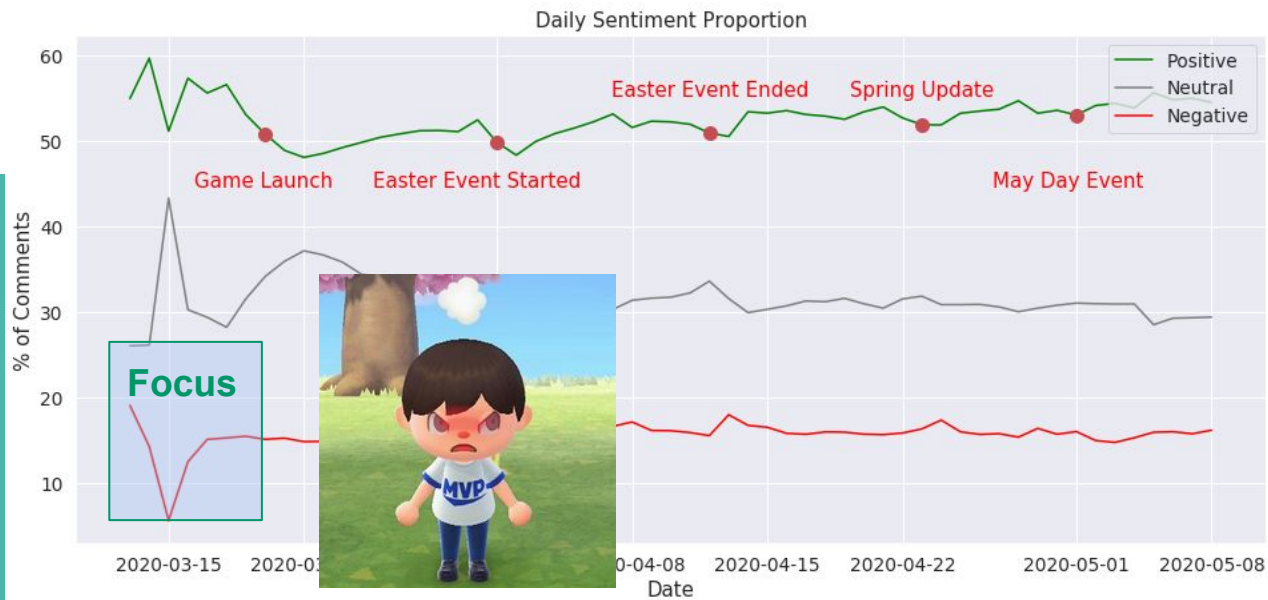Intertopic Distance Map (via multidimensional scaling)

Marginal topic distribution

2%

5%

10%

LDA Method

Most Relevant Terms for Topic 3 (10.1% of tokens)

Use Case

Negativity - Pre-launch

Negative Topics

Order issue

Price

- Topic #2: order digital cancel copy got mine pre get ordered physical amazon th cancelled delayed store
- Topic #3: problem thank yeah enjoy bud lt see fun need make afford add opposite adult hope
- Topic #7: one itch island ac per yet hacked console know got store even hard able buy

Island Limit

Conclusion

- ★ **How wholesome is the Animal Crossing community?**
  - ○ Mostly positive sentiment
  - ○ Biggest topic: Compliment and Praises
- ★ **Use case**
  - ○ "Pulse" of the community
  - ○ Identify issues : stock, server, actual bugs
  - ○ Applies to other products & services
- ★ **Other Notes**
  - ○ No useful metric to evaluate the model
  - ○ Interpretability requires domain knowledge
  - ○ Signal vs Noise

Thank You

Please visit for more:

https://github.com/tchleung/Wholesome_Possum