Customer Feedback Topic Modeling Proposal Presentation

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- Discussion

Introduction

Introduction

Why companies need customer feedback

- Improve products
- Know the general customer experience and satisfaction rate
- Show the attitude of valuing opinions from customers
- Provide useful information to other consumers
- Help managers to make business decisions
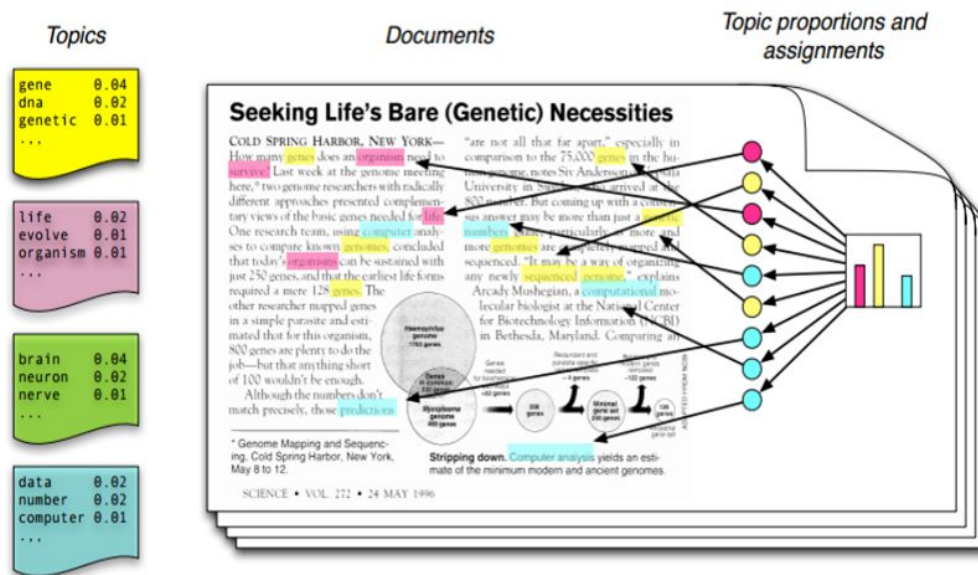
Introduction

Customer Feedback Analysis

- For developers, designers, logisticians, etc.
  - Find product problems

- For decision makers
  - Concise and visualize information

Challenges & Difficulties

Challenges

- Main
  - Extract topics from customer feedbacks

Challenges

- Supplementary
  - Deployment check to make the system reflect the current state
    - How to monitor the system?
    - Which metric to use to know the system works correctly?
    - What method to use to make the system up-to-date?

Difficulties

- Feedback is written in German

- The variation of text
  - Quality of text
  - Content of text from new feedbacks

Solutions

- Data Cleaning

- Use an unsupervised topic extraction method to train a model on previous customer feedback

- Topic extraction

- Deployment

- Retrain a model based on a time period, removing outdated data and include new data

- Topic extraction

- Deployment

Toolkit

- Google Cloud Platform Natural Language
  - Support German
  - Easy to use APIs

- Python spaCy
  - Support German
  - Optimized and fast
  - Good interfaces with other machine learning libraries

- Gensim, Natural Language Toolkit (NLTK), etc.

Summary

Summary

In this project, two goals are about to be achieved. I will compare different tools, such as GCP AI products, Python spaCy, etc. to find the optimal solution and retrieve literature to find the ideal learning methods in the current case. Sample experiments will be performed to test the functionality of the workflow. Clustering metrics will be picked to evaluate the learning result. After training, the deployment process will be considered.

Thank you for your attention!

Discussion