

Introduction

Today’s newspapers have the power to shape one’s entire perspective on the world. The idea is to create, train, adjust and improve a model so that it is fit to analyze various Swiss newspapers and to determine which papers are written with the most negative and positive attitude.

Project pipeline

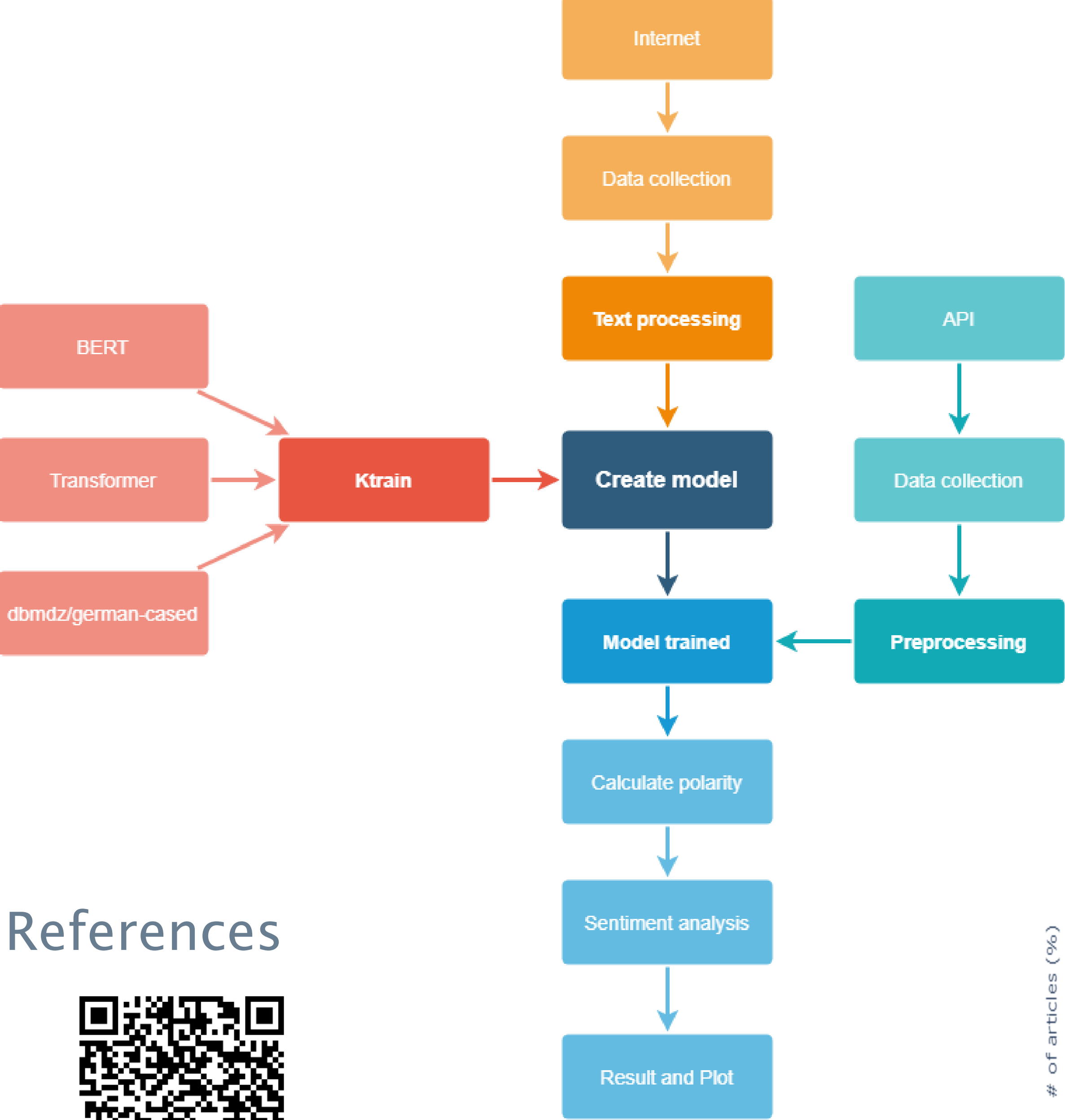


Fig 1: project pipeline

References



Methods

- 1. Model setup
 - 1. BERT, HuggingFace, Ktrain
 - 2. Filmstarts database
- 2. Newspaper database setup
 - 1. Data collection from APIs
 - 2. Preprocessing APIs data
 - 3. Automation
- 3. Sentiment Analysis
 - 1. Feature engineering
 - 2. Polarity calculation
 - 3. Plotting
 - 4. Analyze results

Model

In the process of the work, I created several models, each model being an improvement of the previous one. The first two models are based on the English language, then I trained the later models for the German language.

Model	Dataset	Accuracy
Ktrain1	Hotel Reviews (EN)	85%
Ktrain1 2ver	Hotel Reviews (EN)	96%
Ktrain2 auto	Filmstarts (DE)	90%
Ktrain3 manual	Filmstarts (DE)	93%

Sentiment Analysis

From the graphs I could see that most of the articles (in German) that we read in Switzerland have negative sentiments. Percentage is 60% NEG/40% POS(Fig2). In Fig3 is a comparison between 2 newspaper.

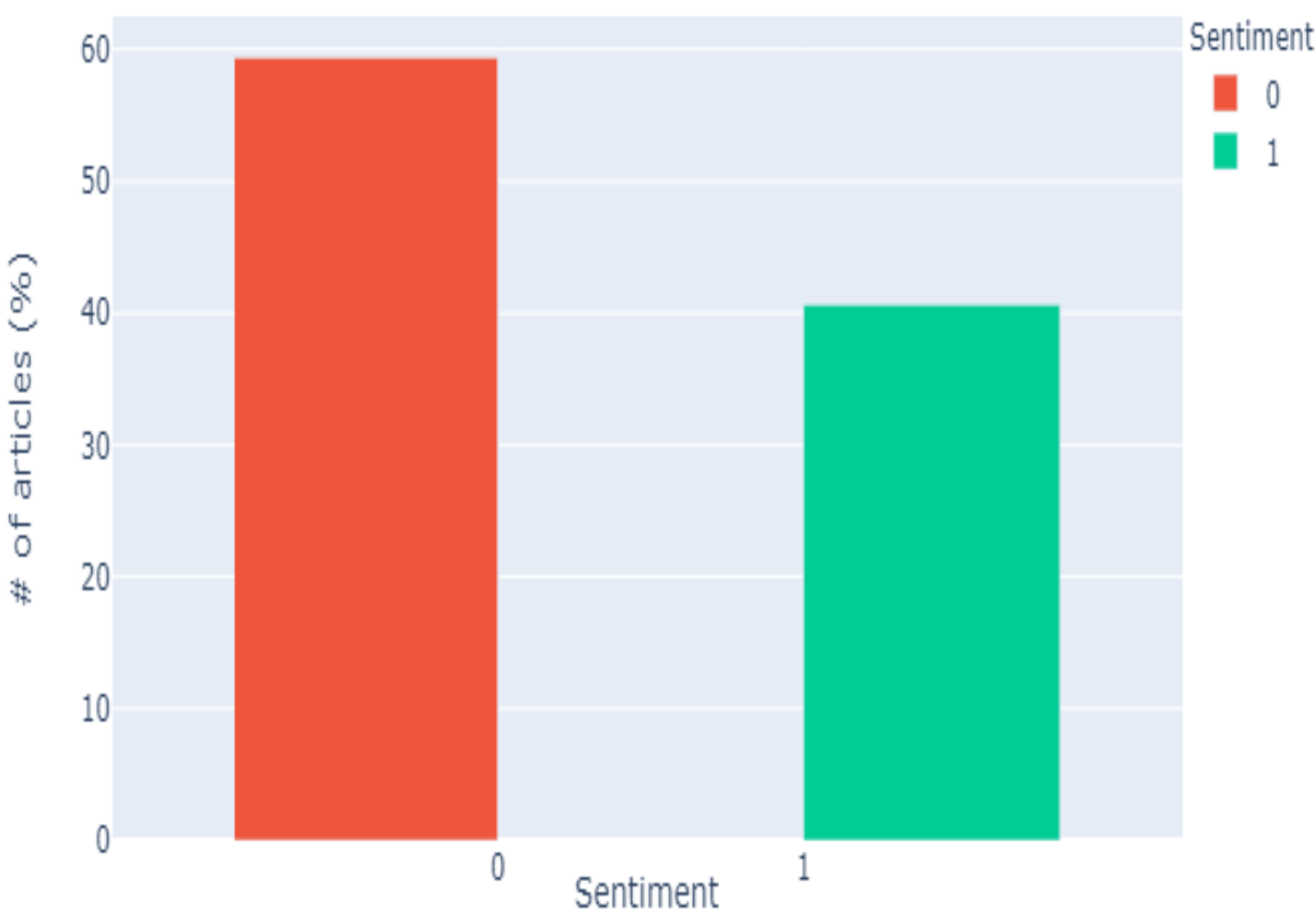
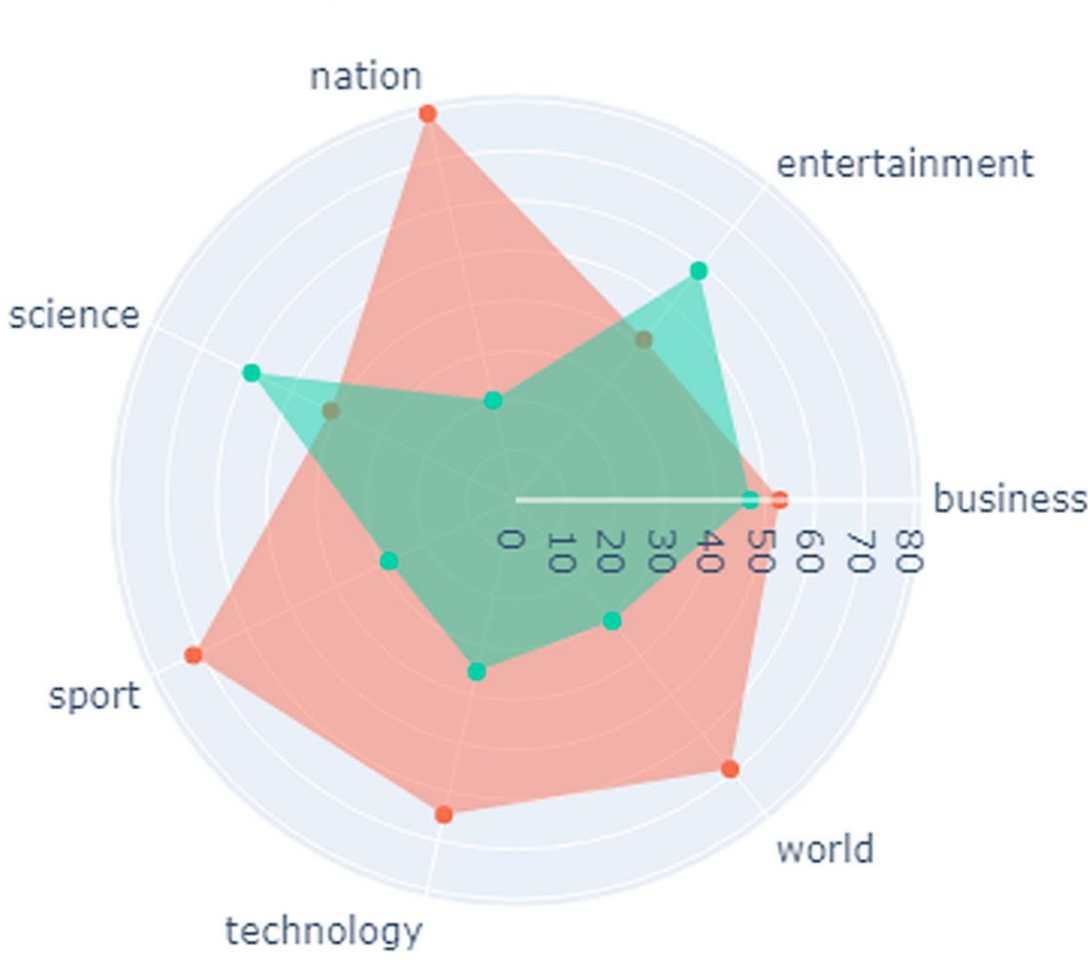


Fig 2: % sentiment

Spider Comparison: 20 minuten



Spider Comparison: blick

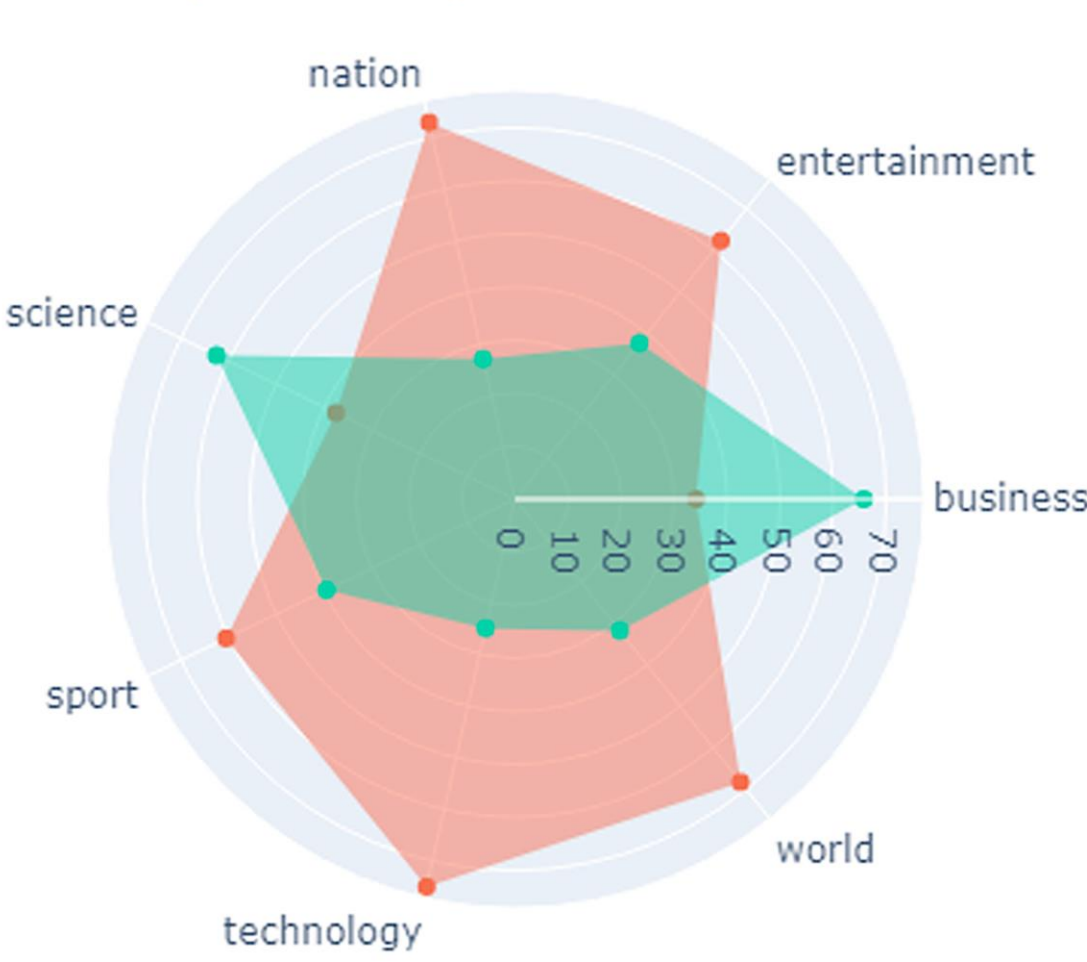


Fig 3: spider sentiment on «20 minuten» and «blick»

Conclusion

This work could very well be part of studying a psychological thesis on the masses, to see how the polarity of the news can influence our life.