Sentiment Analysis

On Facebook Comments

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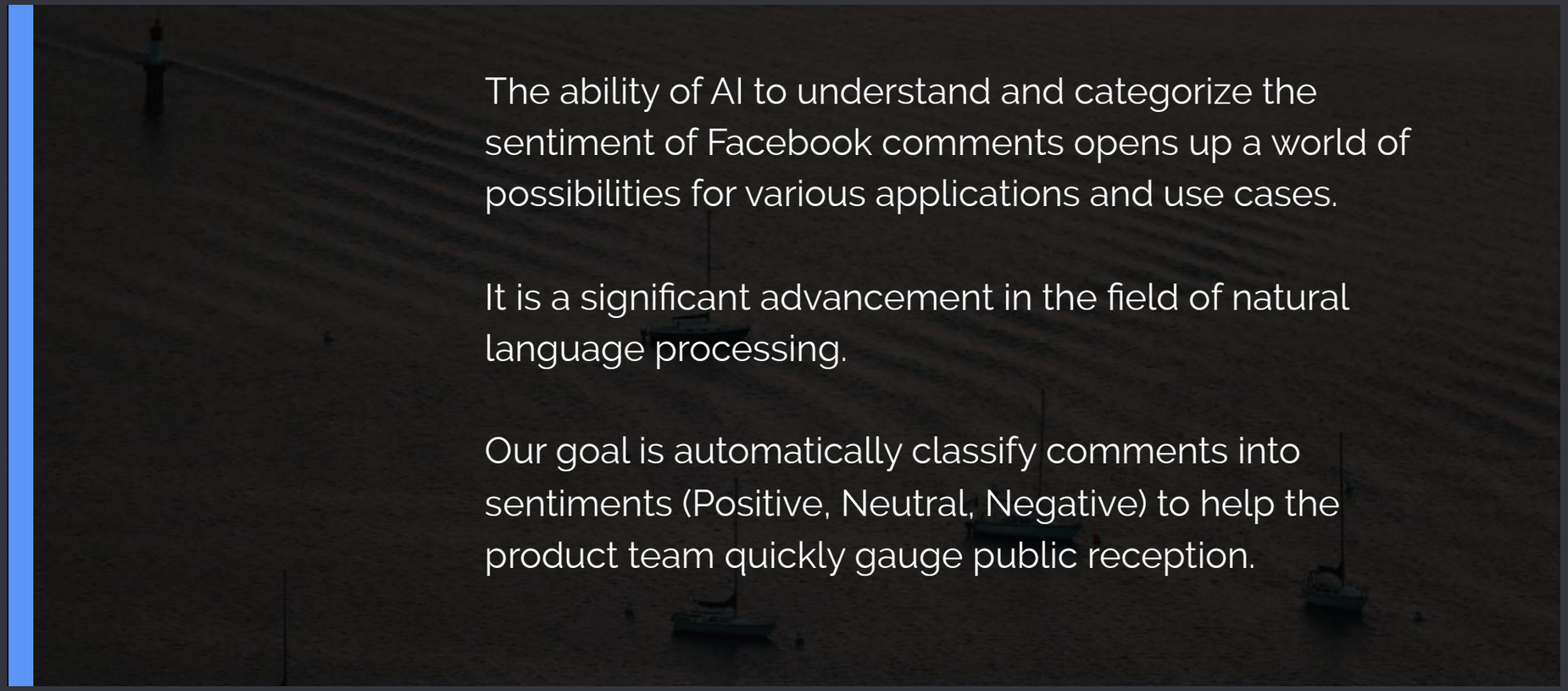


The ability of AI to understand and categorize the sentiment of Facebook comments opens up a world of possibilities for various applications and use cases.

It is a significant advancement in the field of natural language processing.

Our goal is automatically classify comments into sentiments (Positive, Neutral, Negative) to help the product team quickly gauge public reception.

Introduction

Model Description

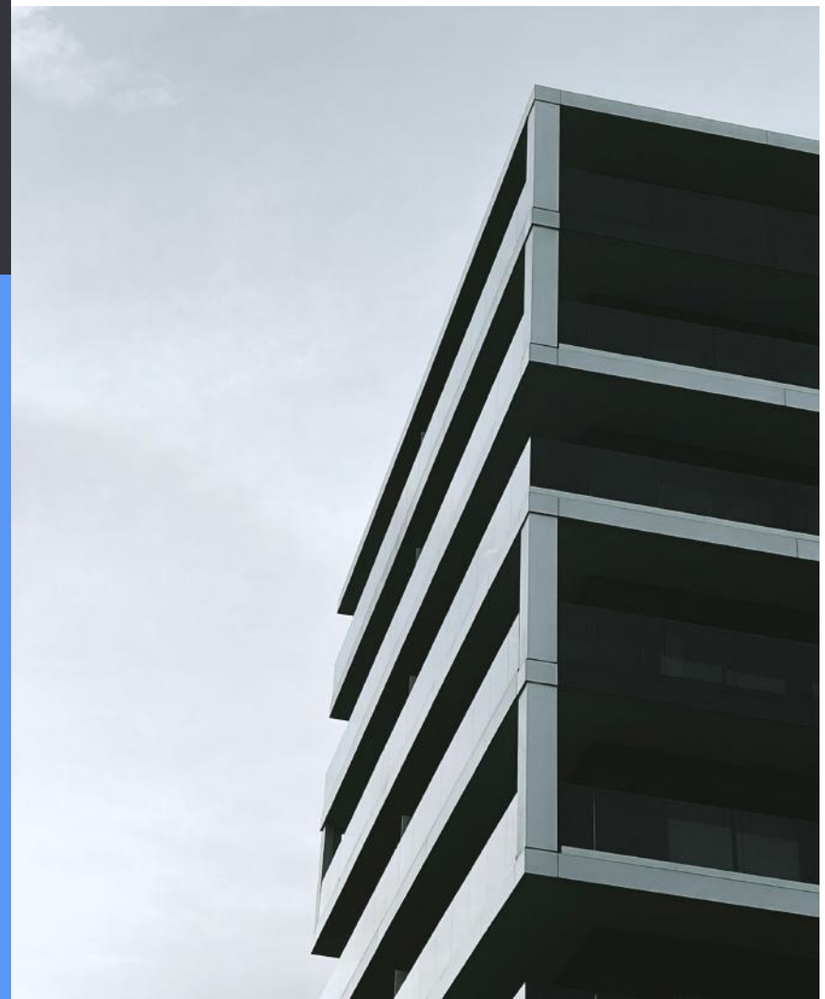
Sentiment classification for Facebook comments in Czech is a challenging task, given the unique nature of the Czech language and the specific data to train on. However, with the advancement of AI models, it has become more feasible. This presentation provides insights on the development and training of an AI model for the task.

This model is an ELECTRA-based transformer model fine-tuned for sentiment classification on Facebook comments written in Czech. It categorizes comments into three sentiments: Positive, Neutral, and Negative.

Model Description

The model uses the `ElectraForSequenceClassification` architecture from Hugging Face's Transformers library, fine-tuned on a labeled dataset of Czech Facebook comments.

Utilized Techniques for Training



AI model is a automated systen that trained on previous supplied data to make decision on newly given data, aka predicting a result from previous learnings.

We have used the provided base model since it has passed all internal security assessments on biases and discrimination

Therefore using our internal model(Electra Architecture 13.8 Million Parameter),

Utilized Techniques for Training

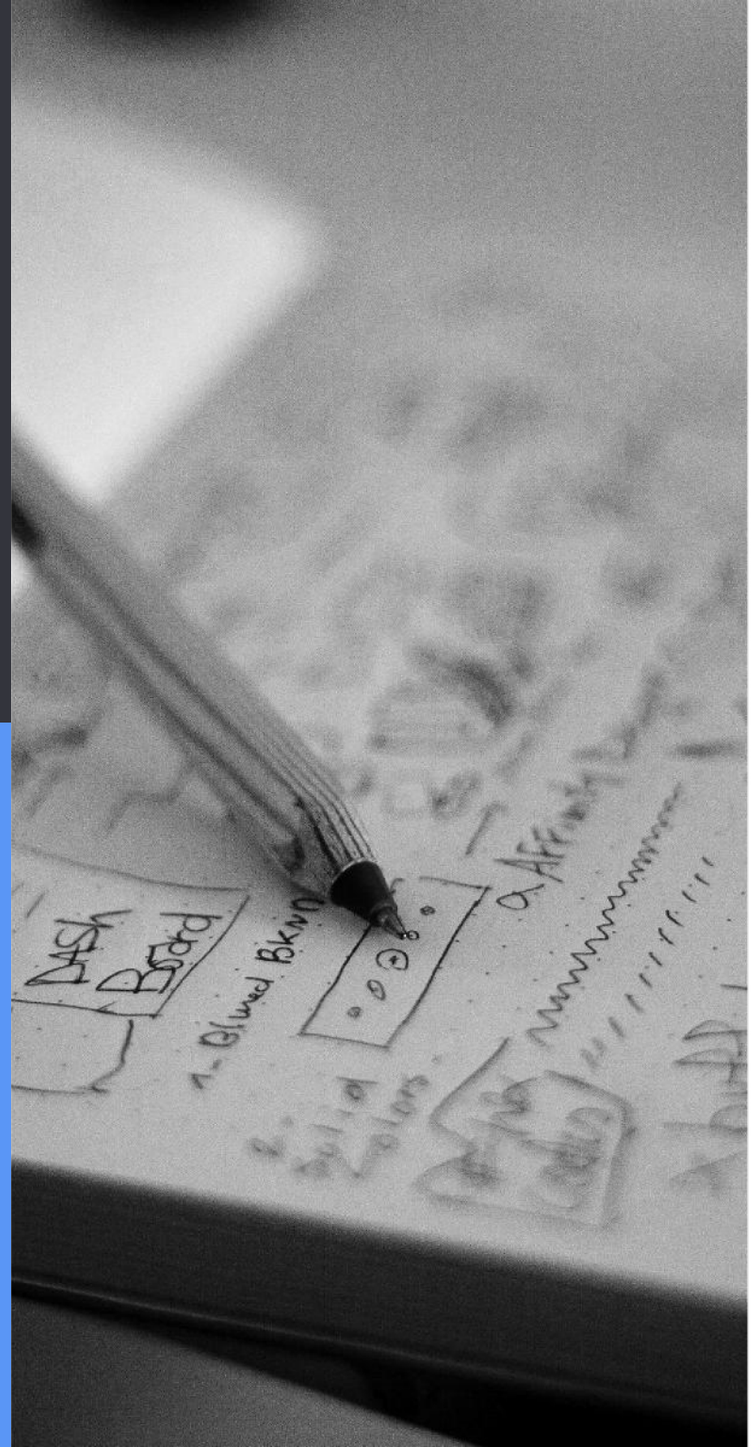
Model have been fine tune it to make decision about given comment whether it is :

- "POSITIVE"

- "NEGATIVE"

- "NEUTRAL".

This decision will help our customers to identify product feedback from their own customers and see how satisfied are the customers. It can be also used with customer churn rate

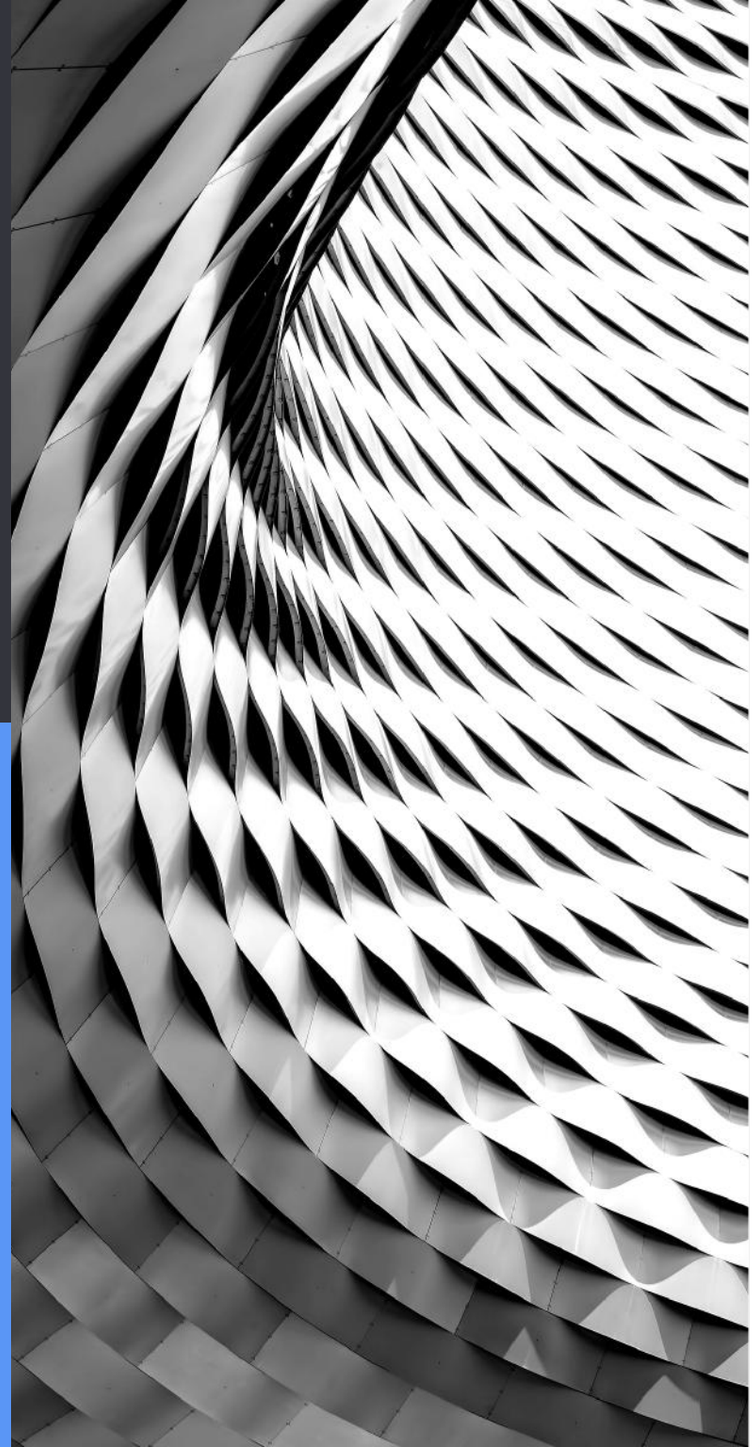


Model Metrics

We have achieved around 80% accuracy with this model, which means that out of 10 prediction, 8 predictions should be correct.

If business requirements demands higher precision/accuracy of the model, model can be trained different parameters, different datasets, and even with the different base model with higher number of parameters.

Generally speaking higher parameter models tends to perform better.



Business Impact and Next Steps

This model can help business with analyzing customer feedback, and resolve the customer issues much more quickly by forwarding customer support agent/social media manager attention to negative comments to help the resolve issue of the customer.

This can be also used as marking total number of negative comments , neutral and positive comments to get a feedback about the item directly from the market.

Further improvement can be done by training this model with more data from customers as well

Summary

The model represents a Facebook-specific sentiment classification model with a focus on Czech language comments.

It is designed to categorize the sentiment of comments as Positive, Neutral, or Negative, bringing a new level of understanding and analysis to social media content.

Model is trained and deployed on the huggingface interfaces for easy use.