# Sentiment Analysis of Financial Headlines

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A Transfer Learning Approach

17-12-2021

#### The Problem

- What?
  - Predict the sentiment (positive or negative) of financial news headlines
- How?
  - NLP (Python, Spacy)
  - LSTM Neural Network (Pytorch/FastAI) + Transfer Learning
- With?
  - Dataset: 1,945 financial news headlines labelled as positive or negative



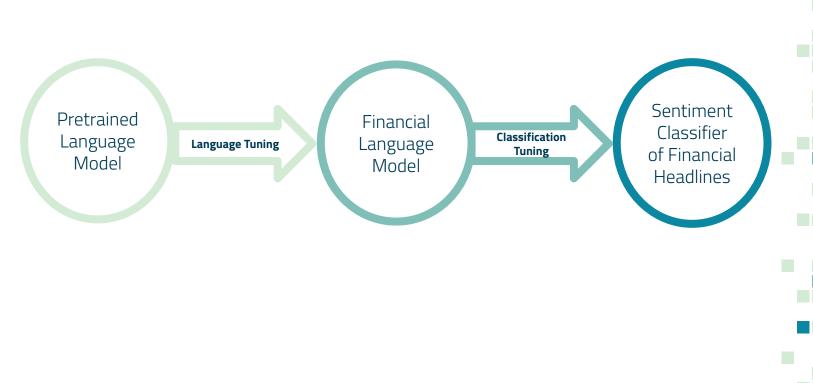
### Extracting sentiment from text

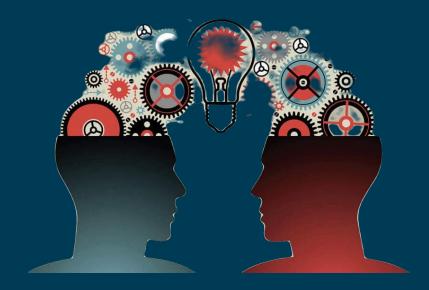
The expansion aims to attract new customers both in Finland and abroad. EXPANSION / ATTRACT/ NEW CUSTOMERS 3 Positive Words, Positive Sentiment

#### Extracting the sentiment from the text

By cutting the number of plants, the group will trim the fixed costs. CUT / PLANTS / TRIM / COST 3 Negative Words, Positive Sentiment

## Transfer Learning





#### Transfer Learning is powerful:

- 90% Model Accuracy
- Only 1,945 labelled headlines required
- Model can be quickly adapted to other contexts

#### Next Steps 🚀

- Include Neutral Sentiment as a classification class
- Implement the tool in a business environment
- Study the impact on the model accuracy of adding more labelled data to the training set



## THANKS!

Any questions?

