FISH: A Financial Interactive System for Signal Highlighting

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GOAL

Facilitate the reviewing process of financial documents analysis and develop a system can be used in practical. Introduce a pipeline to identify important signals with more intuitive way.

CHALLENGES

- Many parts in a financial report are **unimportant** or have only trivial information.
- Disclosing coarse information has **limited usability** in empirical applications.

SYSTEM – TWO-STAGE PIPELINE

Segment Classifier (for sent-level)

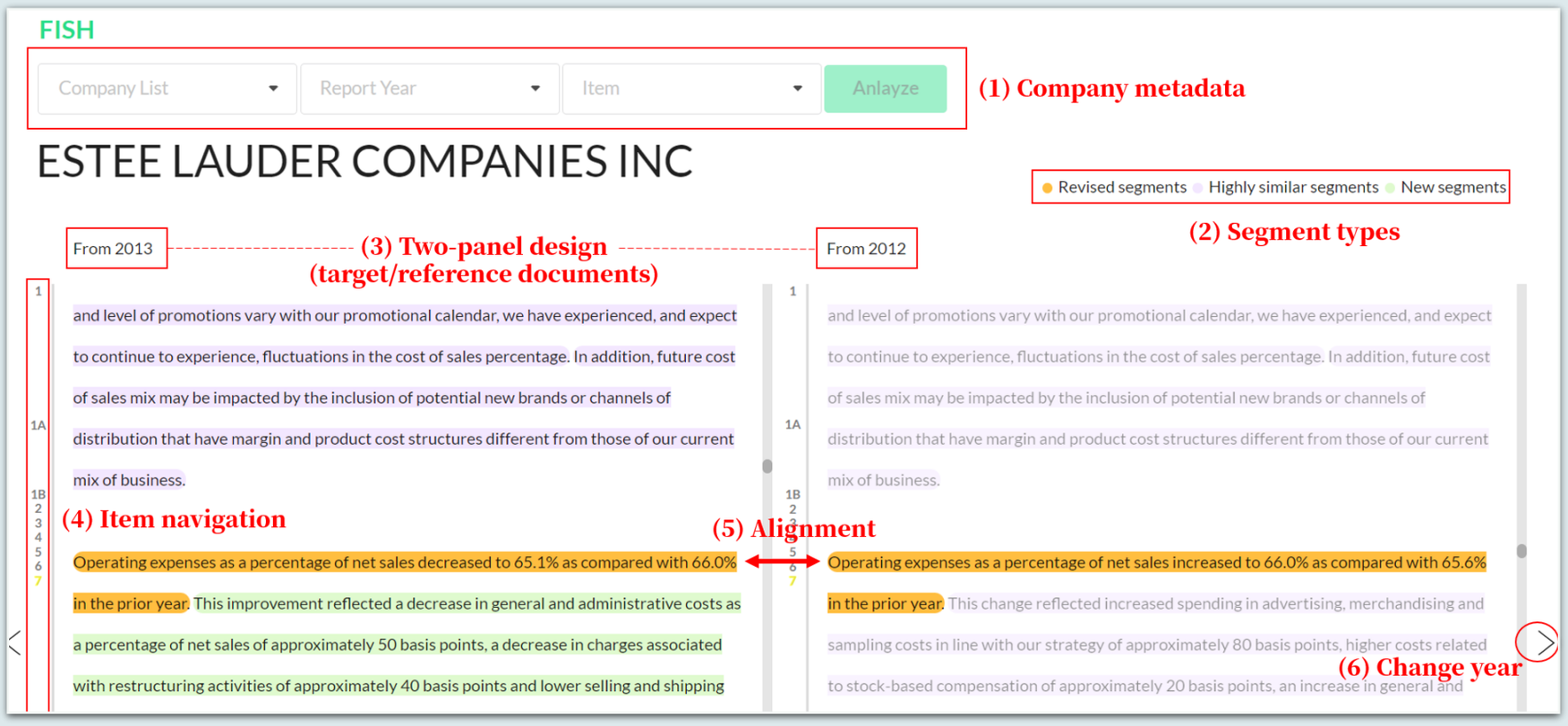
- Define as a sequence classification task.
- Calculate **semantic and syntactic similarity** between segments in the last year (reference) and the focal (target) year.
- Classify each segment pairs into **three types with colors** (revised; highly-similar; new segments).

Segment Highlighter (for token-level)

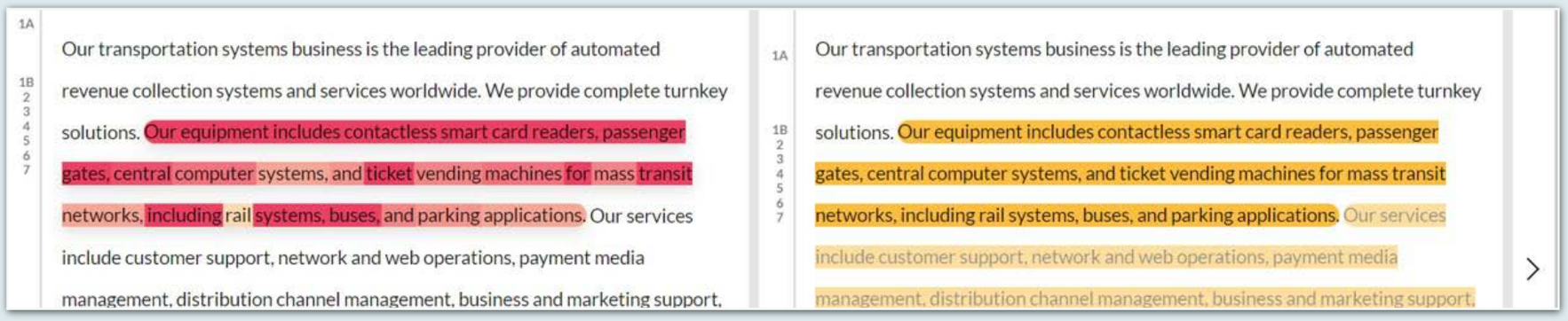
- Define as a sequence labeling task.
- Fine-tune BERT as **token binary classifier** with transfer learning from e-SNLI dataset.
- Demonstrate the predicted word importance with different **shades of color.**

SYSTEM – INTERFACE

Two-panel interface with sentence-level highlighting



Token-level highlighting



Online demo: https://cfda.csie.org/FISH/

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