MilaNLP

Exposing the limits of Zero-shot Cross-lingual Hate Speech Detection

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⚠ DISCLAIMER ⚠

This presentation contains examples of offensive language;

they do not represent the views of the author.

Challenges

1) Hate Speech covers a wide range of target types

2) Lack of consistency across available corpora

3) Research is mainly conducted on English

The perfect solution

1) Hate Speech covers a wide range of target types

2) lack of consistency across available corpora

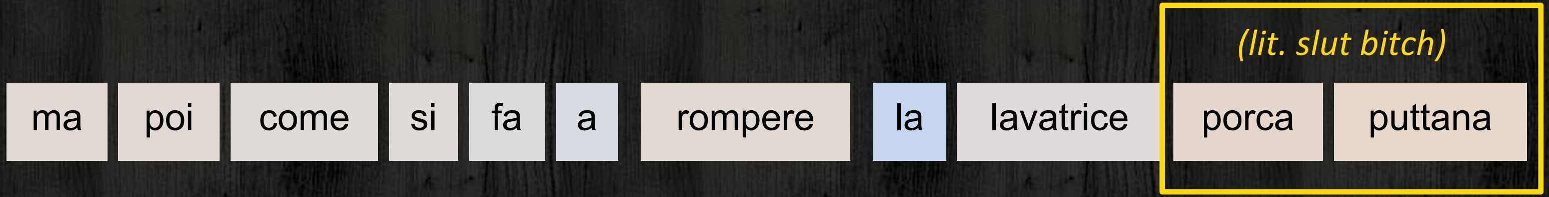
3) Research is mainly conducted exclusively only on English

Zero-shot, cross-lingual solutions based on

multilingual contextual embeddings!

But is it?

- Zero-shot, cross-lingual learning hate speech detection does not transfer to different target types and is strongly limited by the high presence of language- and target-specific taboo interjections in non-hateful contexts



how the hell can you break the washing machine

But is it?

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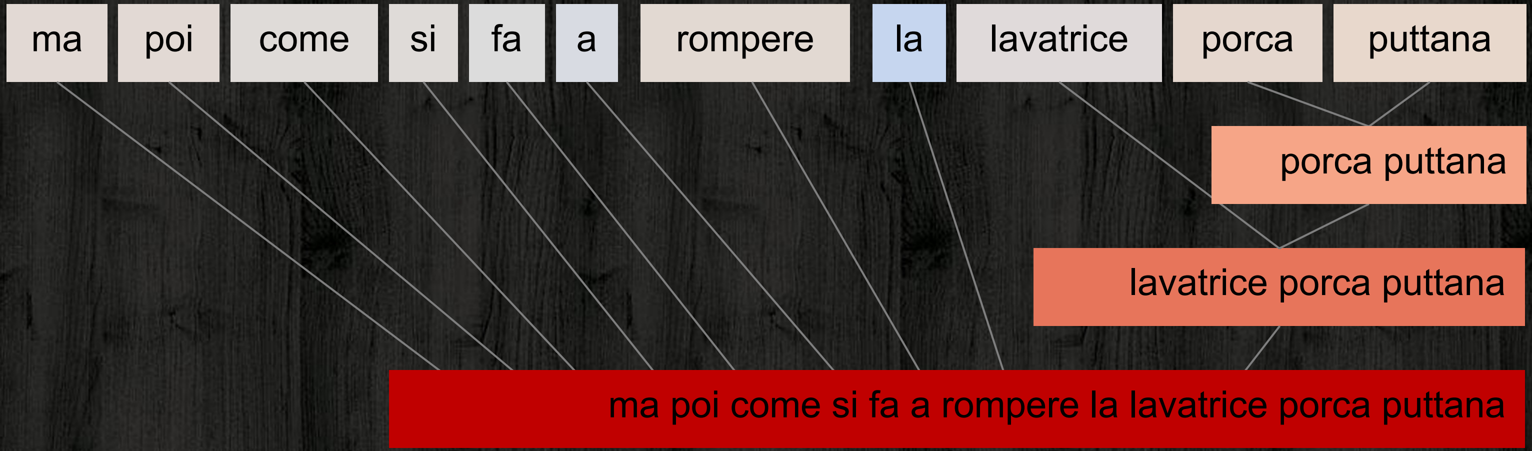


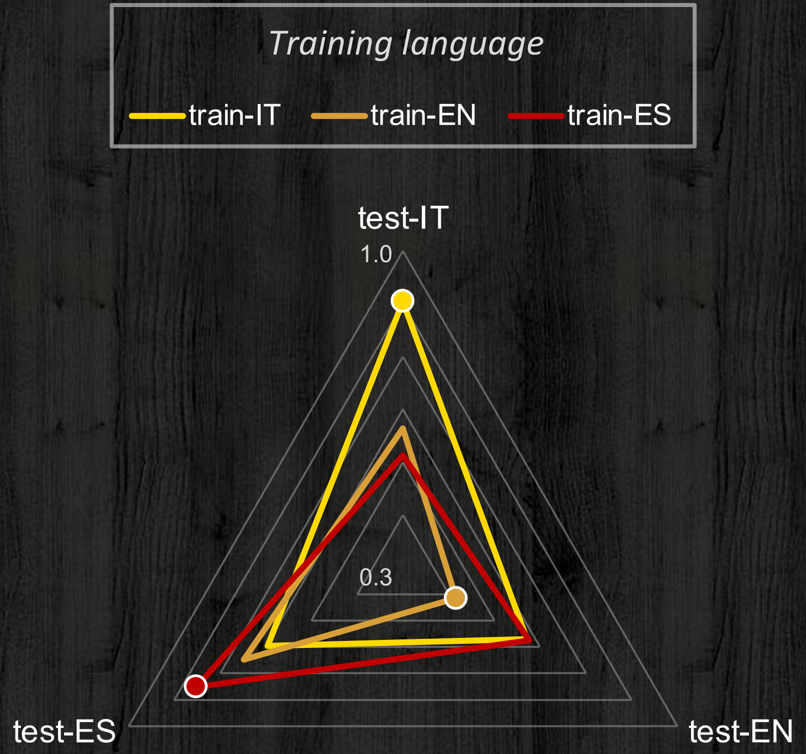
Experimental Settings

- Zero-shot Cross-lingual VS Monolingual

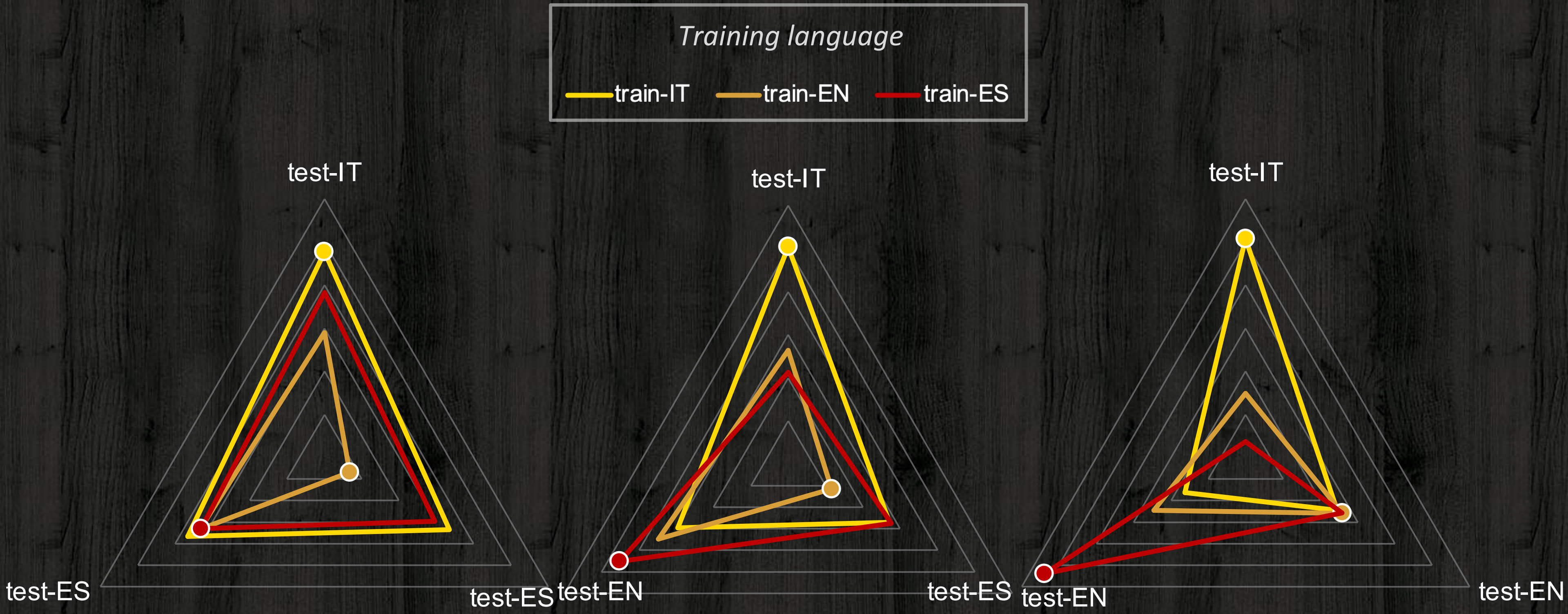
- Dataset: benchmark corpora of hate speech against immigrants and women in Italian, English, and Spanish (Bosco et al., 2018; Fersini et al., 2018; Basile et al., 2019)

- Multilingual contextual embeddings: multilingual BERT (mBERT) (Devlin et al., 2019) and XLM-R (Conneau et al., 2020)

Results: HS against immigrants and women



Results



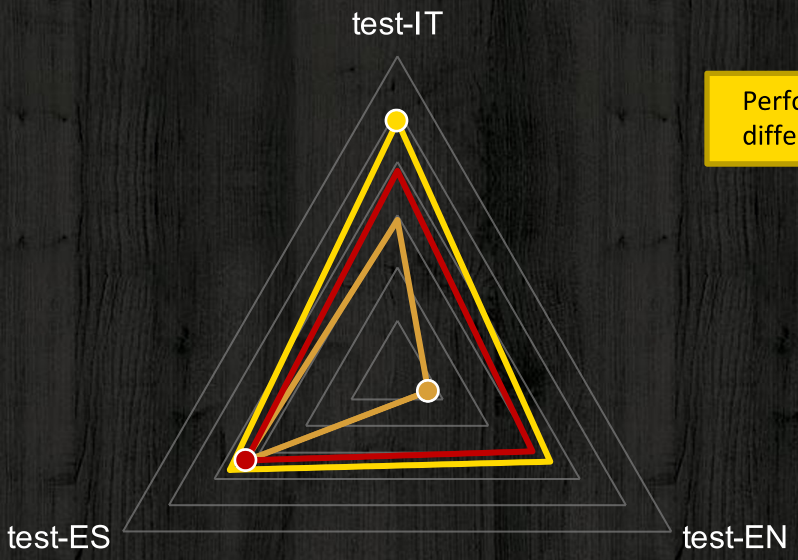
HS against immigrants

HS against women

Results

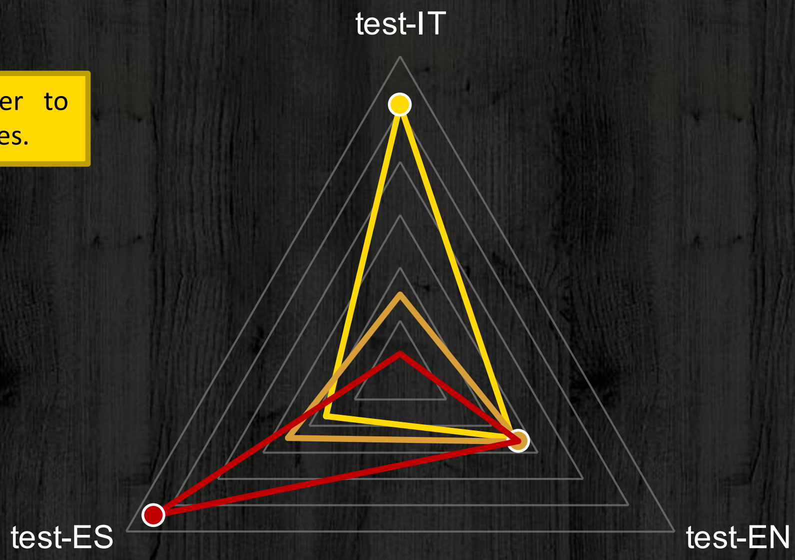
Training language

— train-IT — train-EN — train-ES



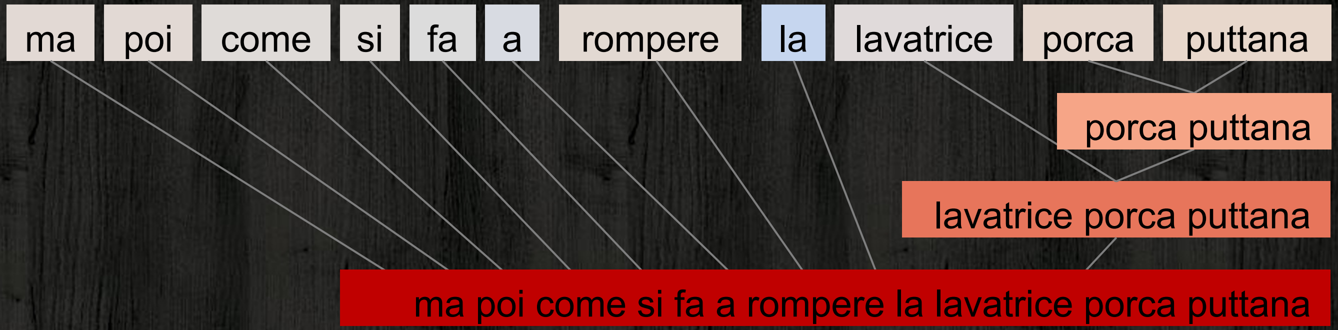
HS against immigrants

Performance does not transfer to different hate speech target types.

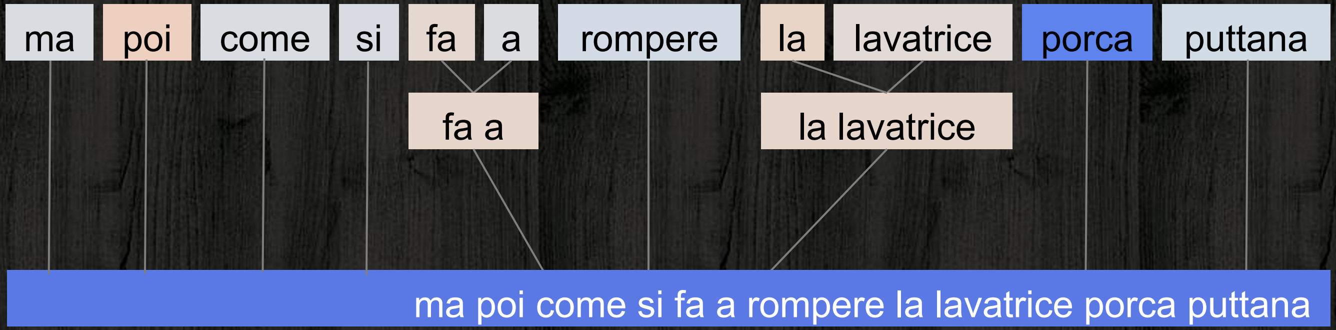


HS against women

Limitation - Examples



Misclassified prediction trained on English and Spanish data ✗



✓ Correct prediction by monolingual model

Take-home points

- Zero-shot, cross-lingual transfer learning is not a feasible solution for hate speech detection, which is language- and target-specific
- Few-shot, cross-lingual learning provides improvements (+16%)
- There is the need of more conscious research

Thank you!

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