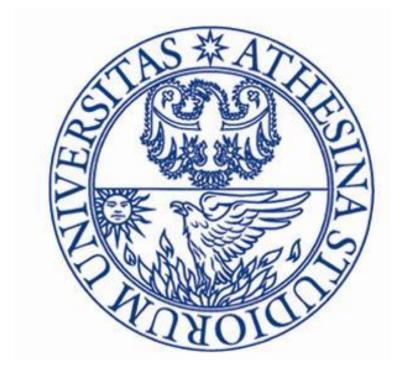


FBK's Multilingual Neural Machine Translation System for IWSLT 2017



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Two Shared Task Participation

- I. Multilingual Model: a translation task in a small data condition for 20 language directions.
- II. Zero-Shot Model: a zero-shot translation (ZST) task in a similar small data condition (4 zero-shot & 16 non-zero-shot).

Overview

- 5 languages
- 20 possible directions
- ~ 200K available parallel sentences for each direction
- 5 artificial language tags (2en, 2de, 2nl, 2it, 2ro), used on the source side

Dutch Italian English Romanian German Multilingual NMT Romanian German German

Types of Models Trained

Single Language Pair:

- 20 single language pair models

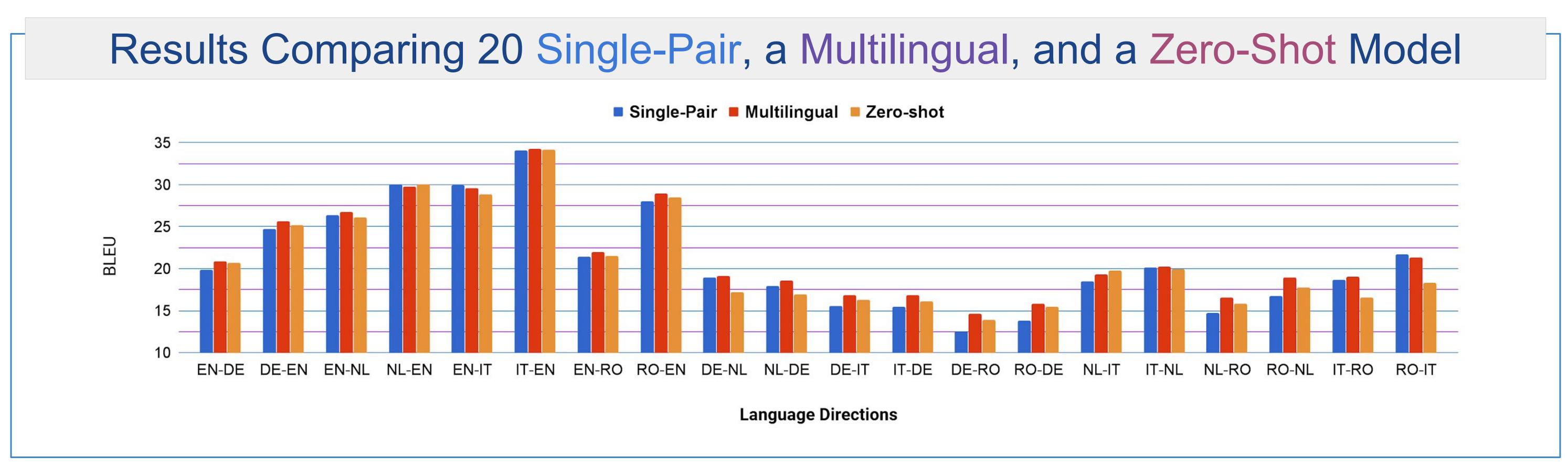
Multilingual Model:

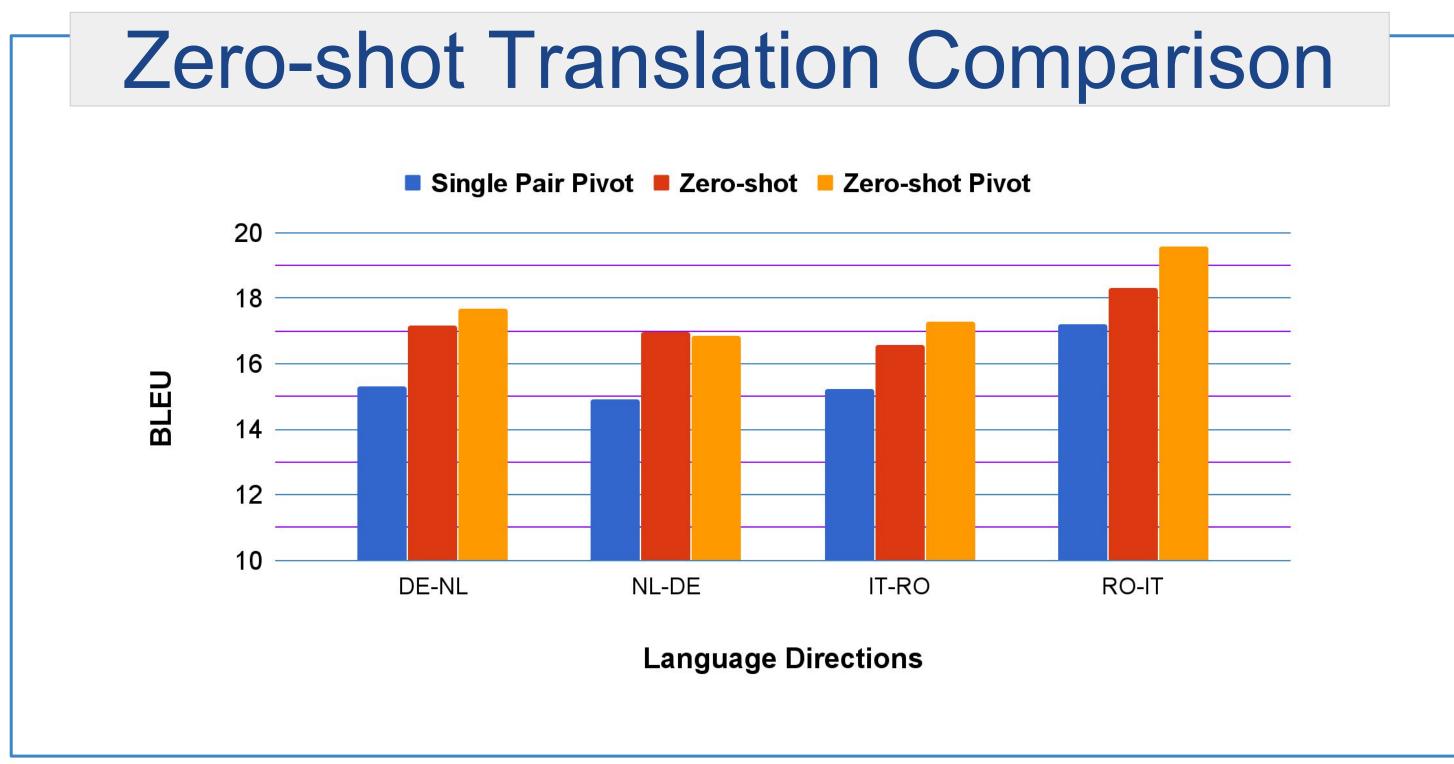
- utilized all the available dataset for 20 directions

Zero-Shot Model:

- excludes four pairs from the 20 direction training data, (Dutch<-->German, Italian<-->Romanian).
- * All models are trained using the same parameter settings.

Zero-shot Translation Methods Romanian Multilingual Italian Romanian Multilingual Italian Romanian NMT Romanian NMT-1 NMT-2 Italian English*





Conclusion

- The Multilingual system delivered better performance than the single language pair systems.
- The Zero-Shot model showed a comparable performance in the non-zero-shot directions with the Multilingual model.
- The Zero-Shot model outperformed the pivoting approach using Single-Pair models.

ModernMT
Next Generation
Machine Translation





