



We want you to state your preference: Meaning, Rhyme or Singability

Generation of Czech Lyrics to Cover Songs

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Introduction

Goal

- **Explore** lyrics generation
- **Extract** important features - from lyrics only (no melody)
- **Generate** Czech lyrics of English originals

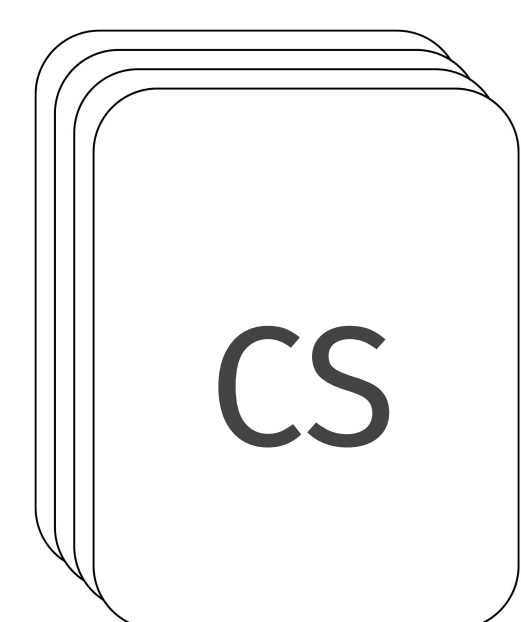
Experiments

- LLM zero-shot | LLM few-shot | fine-tuning LMs
- Czech LLaMA | Czech GPT2 | Czech Mistral
- *Best performing model: **BUT-TINYLLAMA** trained on whole song sections and extracted syllables, keywords and rhyme scheme*

Datasets

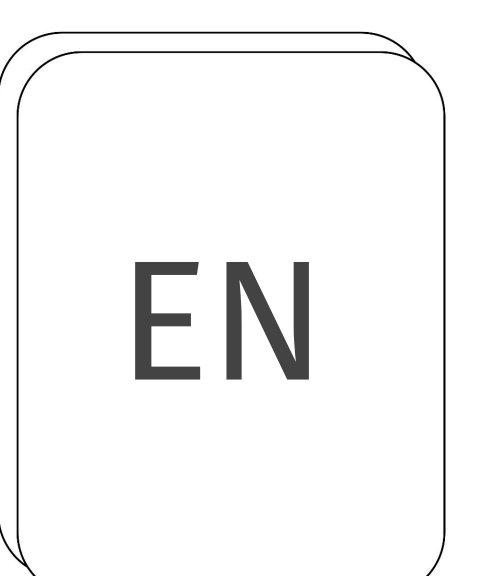
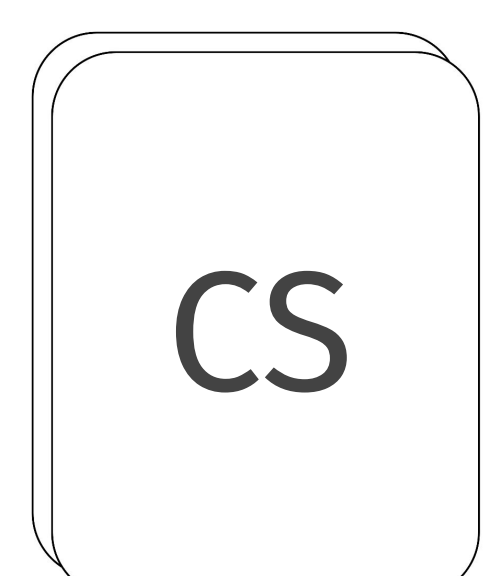
Monolingual Dataset - Train

- Lyrics + tags (syllable counts etc.)
- Isolated song sections
- **77 478 samples**

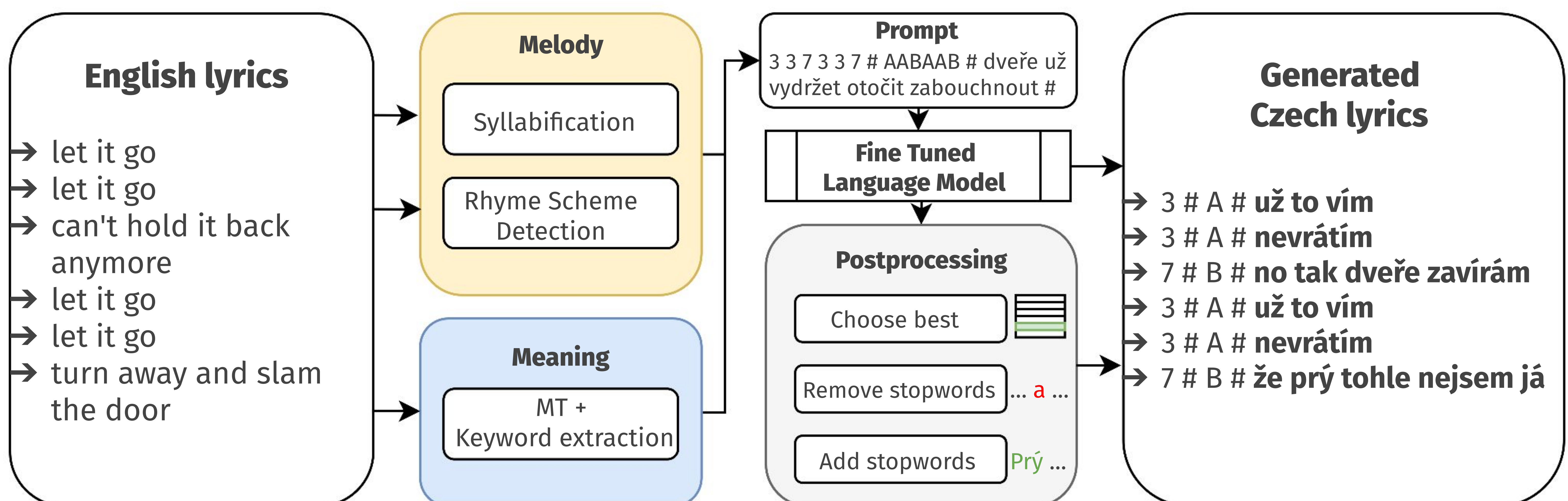


Bilingual Dataset - Test

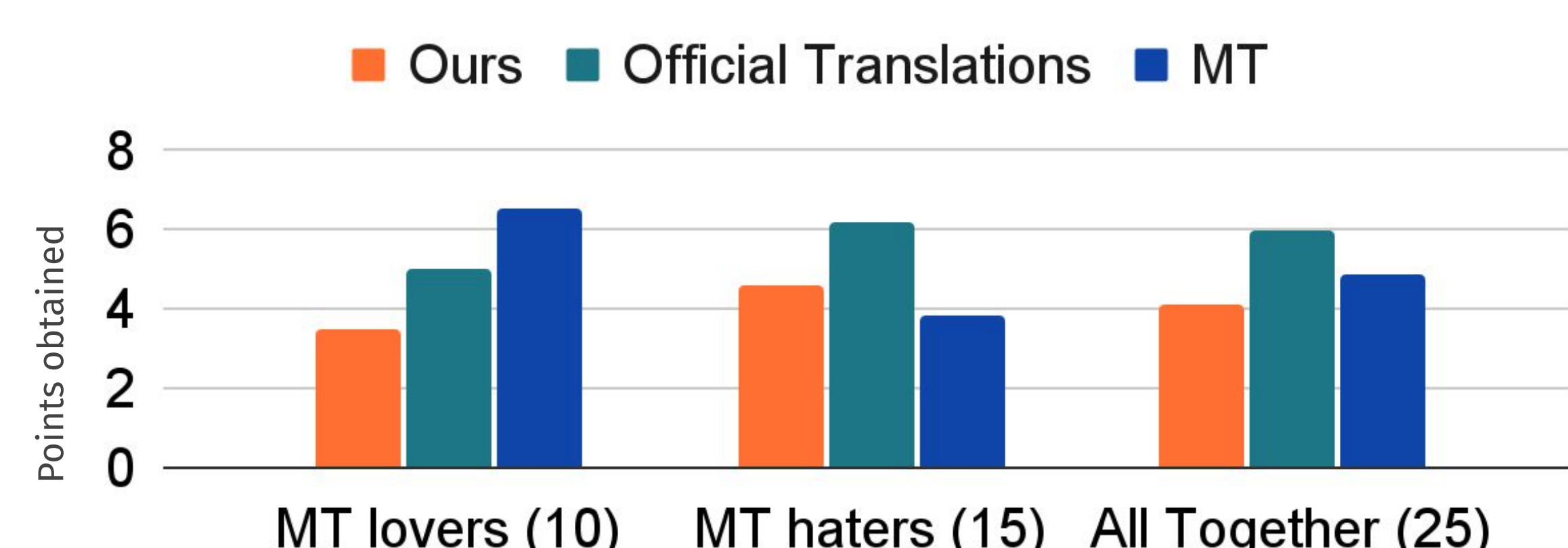
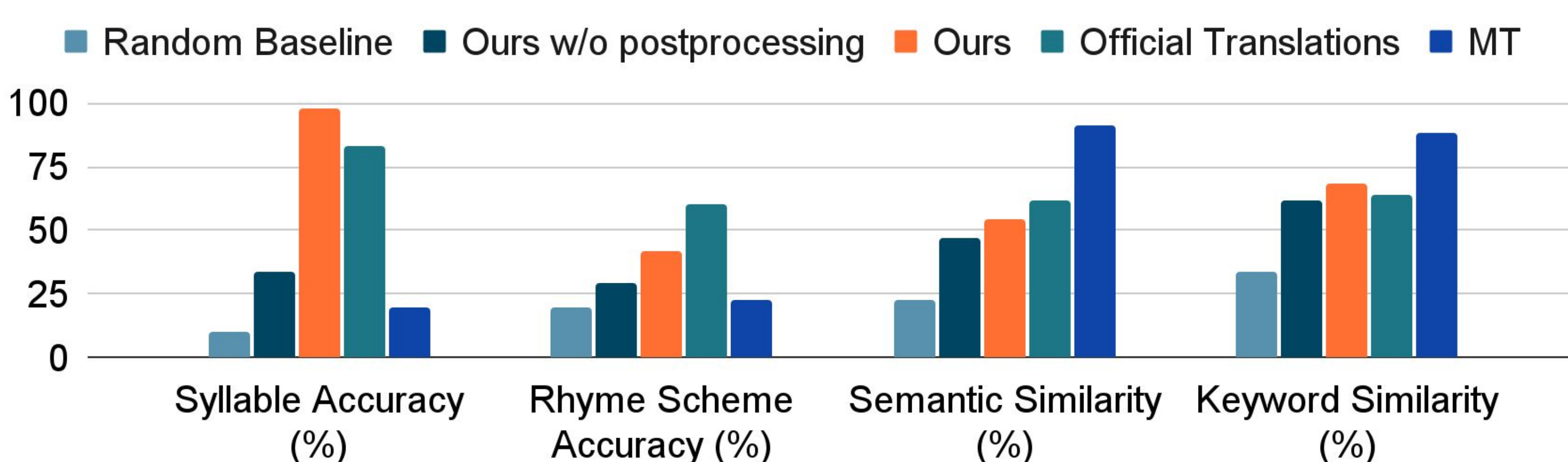
- Lyrics + tags (syllable counts etc.)
- Mapped pairs of song sections
- Official lyrics translations
- **649 samples**



Pipeline



Singability Evaluation



Automatic Evaluation: Rhythm, Rhyme, Meaning

- Prompting effectively influences meaning and rhythm
- Rhyme schemes are context-driven (prompt has minimal impact)
- Official translations are not direct translations (BLEU score of 0)
- Postprocessing improves results

Manual Evaluation: Naturalness, Overall Singability

- Manual evaluation reveals varying preferences
- Fine-tuning smaller LMs is better than few-shotting LLMs
- Training on whole sections improves naturalness



<https://github.com/stepankovab/Generation-of-Czech-Lyrics-to-Cover-Songs>

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