

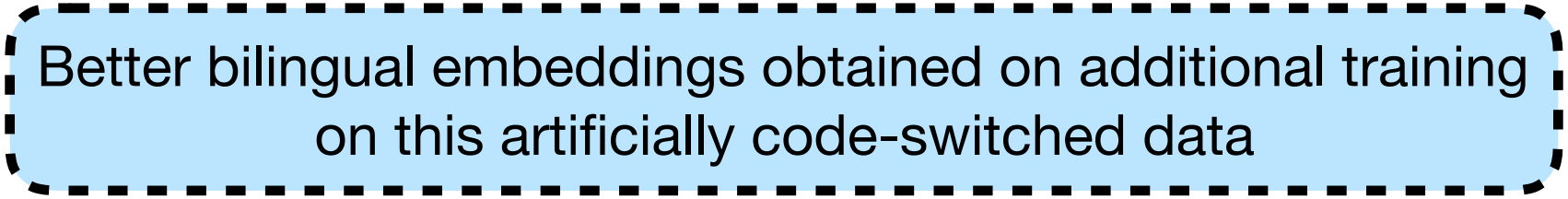
Heuristic based approach



Heuristic: Replace a word with its translation in other language with some probability

Heuristic 1³ :

$sw(w_t) \sim \text{Bernoulli}(p)$



Better bilingual embeddings obtained on additional training
on this artificially code-switched data

Heuristic 2 :

$sw(w_t \mid \text{lang}(w_{t-1}) = L_1) \sim$
Bernoulli (p_1)

$sw(w_t \mid \text{lang}(w_{t-1}) = L_2) \sim$
Bernoulli (p_2)

**Long monolingual
stretches less probable**



[3] *Vickei et al. Multilingual Embedding via Artificial CS, 2016*

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