Karlsruhe Institute of Technology

Chinese Preordering on Multiple Syntactic Levels

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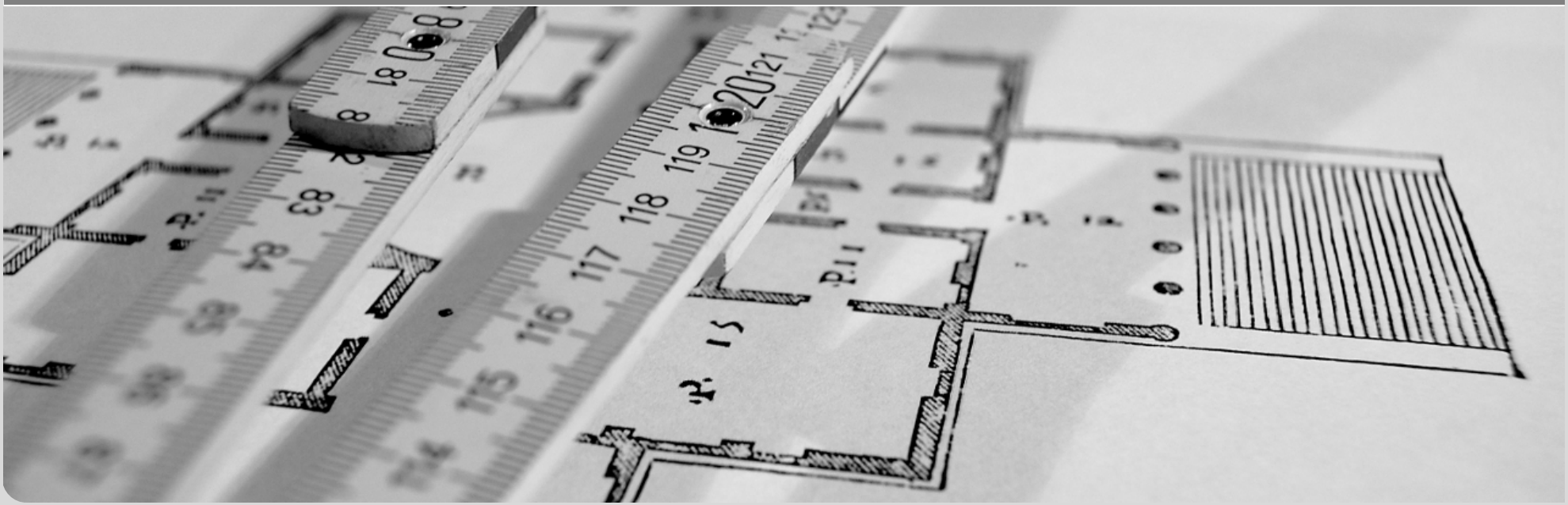


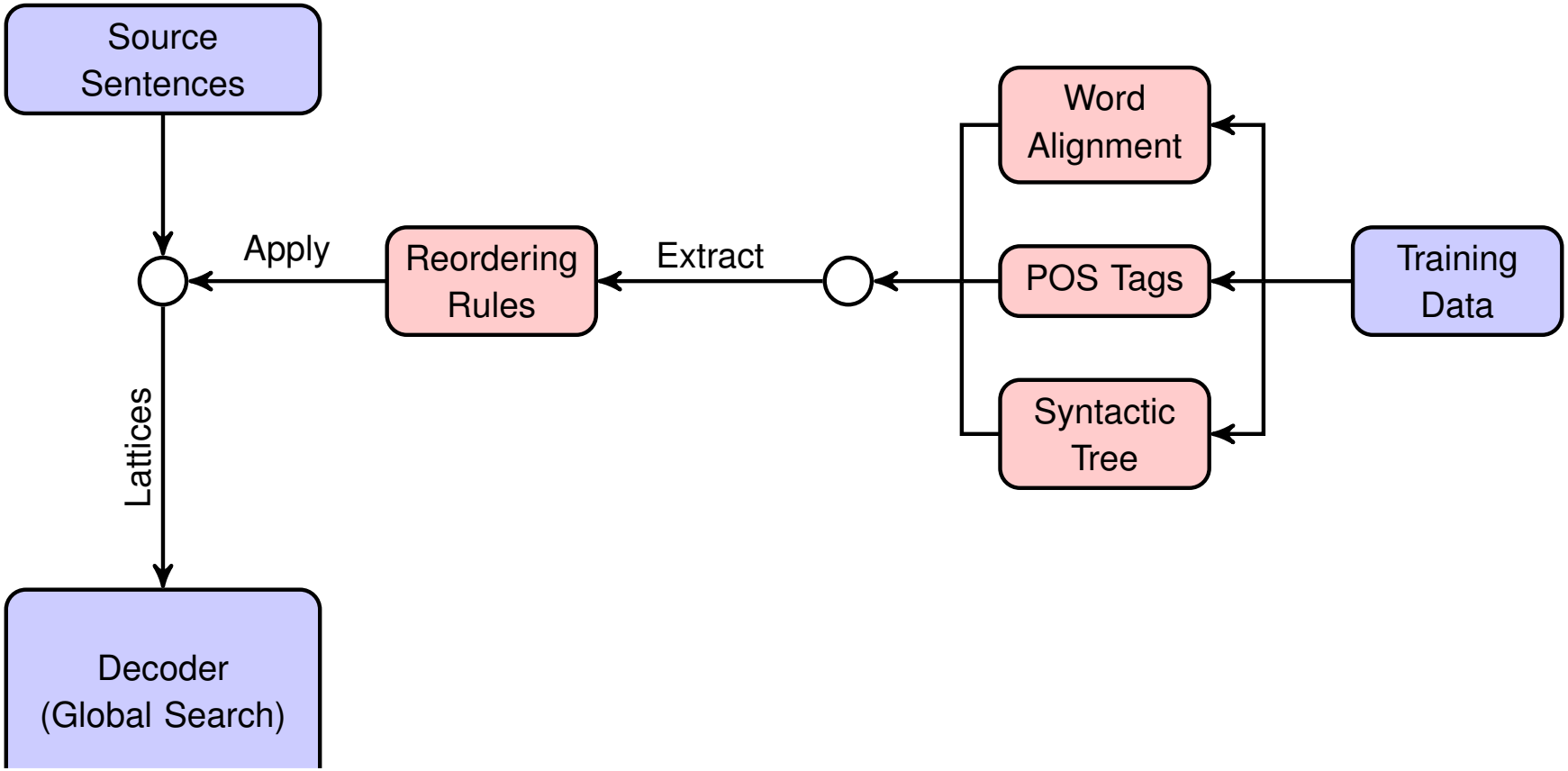
Outline

Introduction

Goal & Motivation & Reason, etc.

- X

Preordering System

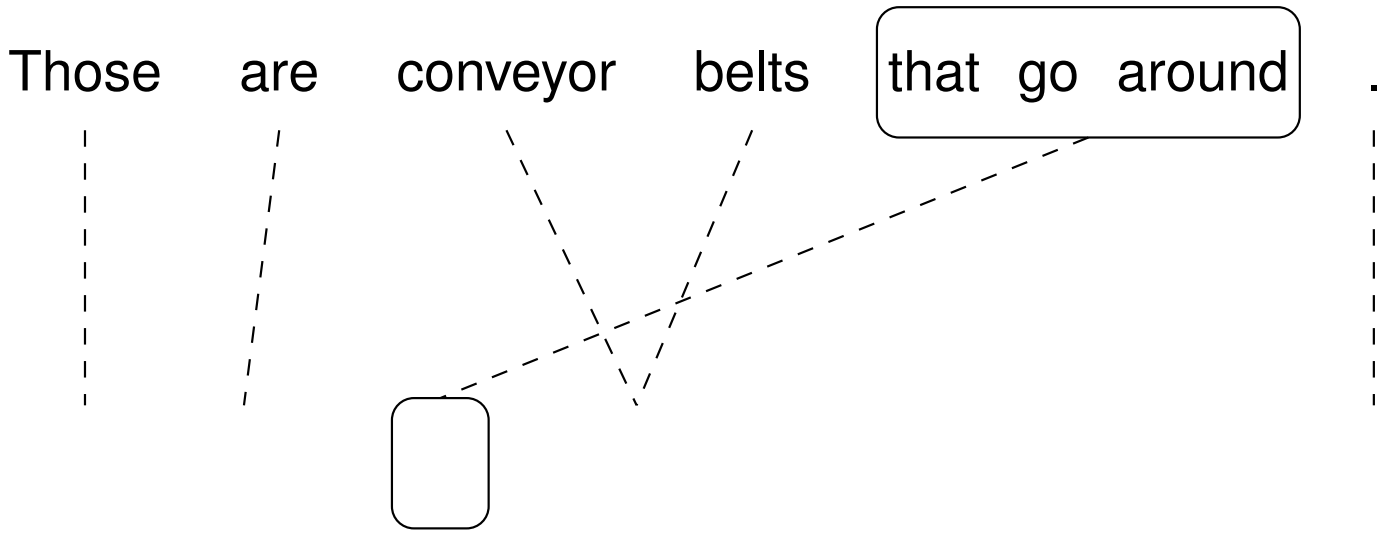


Rreordering Rules

- Short rules
- Long rules
- Tree rules

Chinese Word Orders

- Premodifier instead of postmodifier
  - Adverbials
  - Relative clauses
  - Preposition phrases



Chinese Word Orders

- Questions
- Special sentence constructions
  - *There aren't many people around that are really involved with architecture as clients.*
  - *Never would India have thought on this scale before.*

Reordering Problems

- Long distance position change
- Reordering on multiple syntactic levels

Reordering Approach

Rule Extraction & Application

- X

Results

	BLEU Score	Improvement
Baseline	12.07	
+Short Rules	12.50	3.56 %
+Long Rules	12.99	7.62 %
+Tree Rules	13.38	10.85 %
+MLT Rules	13.81	14.42 %
Oracle Reordering	18.58	53.94 %
Long Rules	12.31	1.99 %
Tree Rules	13.30	10.19 %
MLT Rules	13.68	13.34 %

Table: BLEU score overview of English-to-Chinese system

Results

	BLEU Score	Improvement
Baseline	21.80	
+Short Rules	22.90	5.05 %
+Long Rules	23.13	6.10 %
+Tree Rules	23.84	9.36 %
+MLT Rules	24.14	10.73 %
Oracle Reordering	26.80	22.94 %
Long Rules	22.10	1.38 %
Tree Rules	23.35	7.11 %
MLT Rules	23.96	9.91 %

Table: BLEU score overview of Chinese to English systems

Conclusion

- Better translation quality
- Better syntactic structure
- Space for further improvement

Outlook

- Other rule types
- Better reordering approaches
- Vector presentation as feature
- Reordering with less information

Thank you for your attention

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