

Meaning-Based Textual Novelty Detection

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Problem/Significance

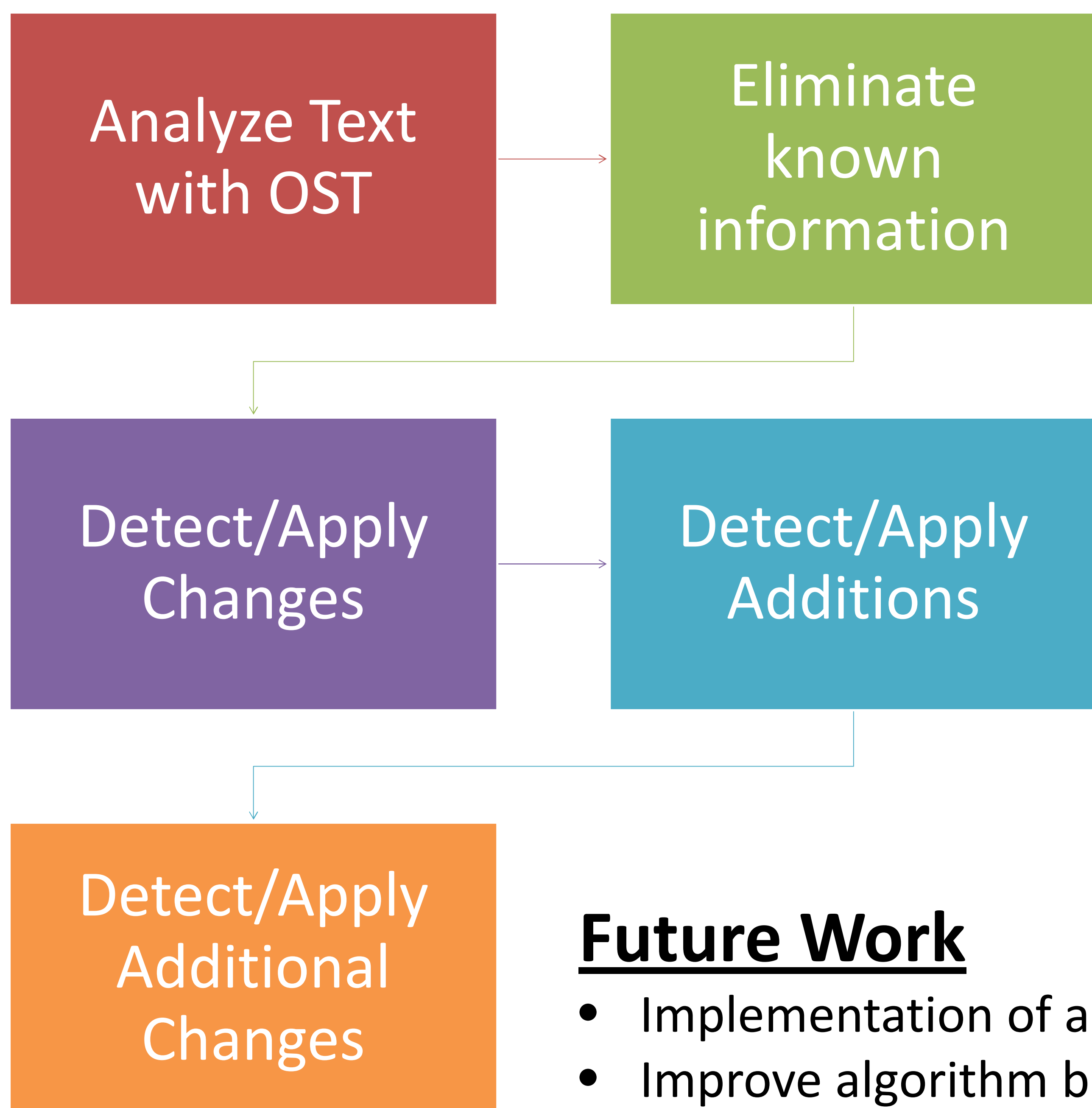
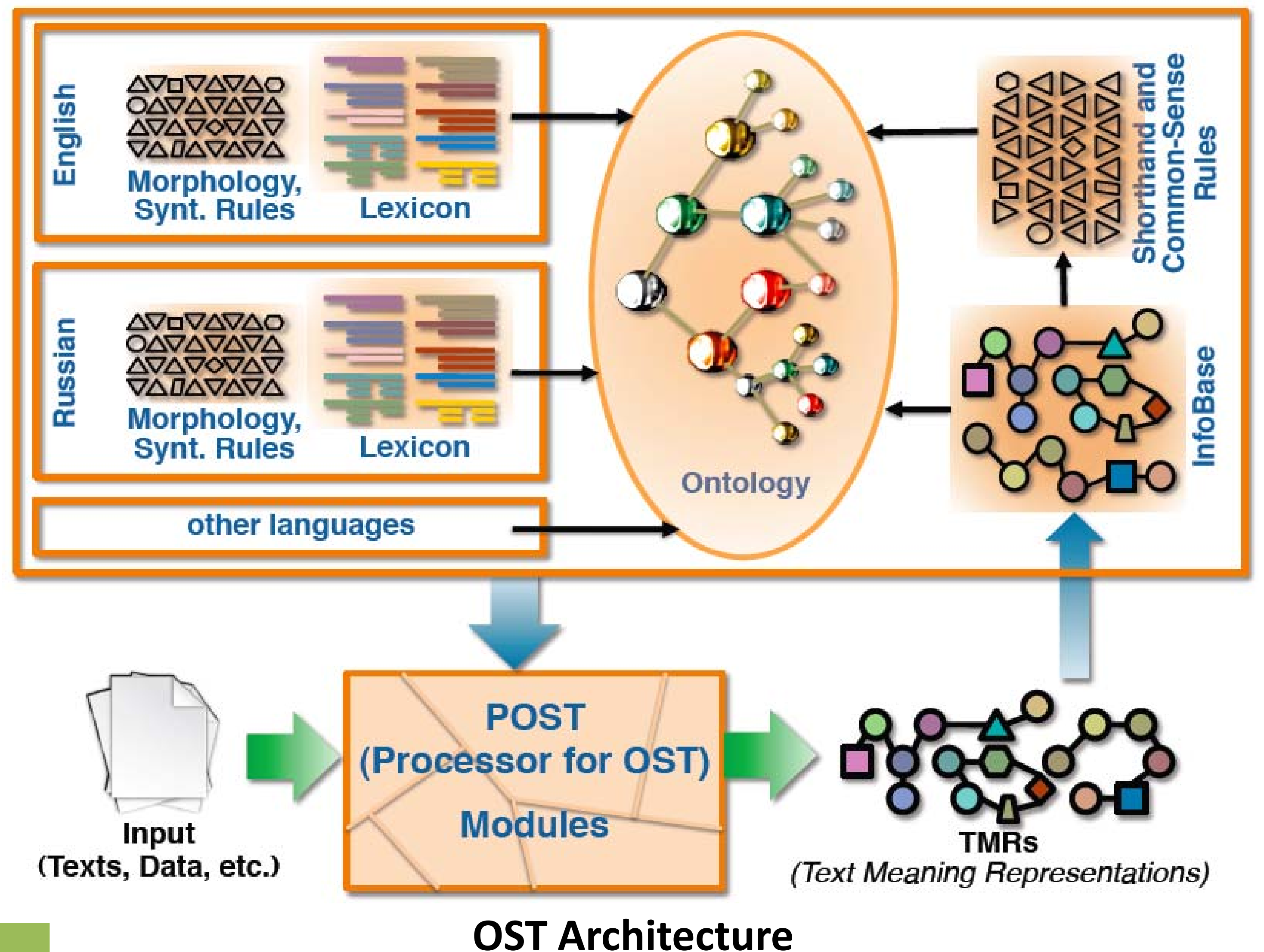
- Novelty detection systems have low accuracy
- Higher accuracy brings new uses (e.g. IAS)

Proposed Solution

- Meaning-based novelty detection
- Ontological Semantic Technology (OST)

Types of Novel Information

- Change to existing knowledge
- Addition to existing knowledge
- Addition causing change



Future Work

- Implementation of algorithm; testing on various text corpora
- Improve algorithm based on test results

Change

- Concept, Property, Property of Concept (Ontology)
- Instance of Concept, Property of Instance (InfoBase)

Addition

- Concept, Property, Property of Concept (Ontology)
- Instance of Concept, Property of Instance (InfoBase)
- Word, Phrase, Word Use (Lexicon)

Potential IAS Applications

- Intelligence documents parsing (e.g. transcripts)
- Police interview intelligence gathering



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