



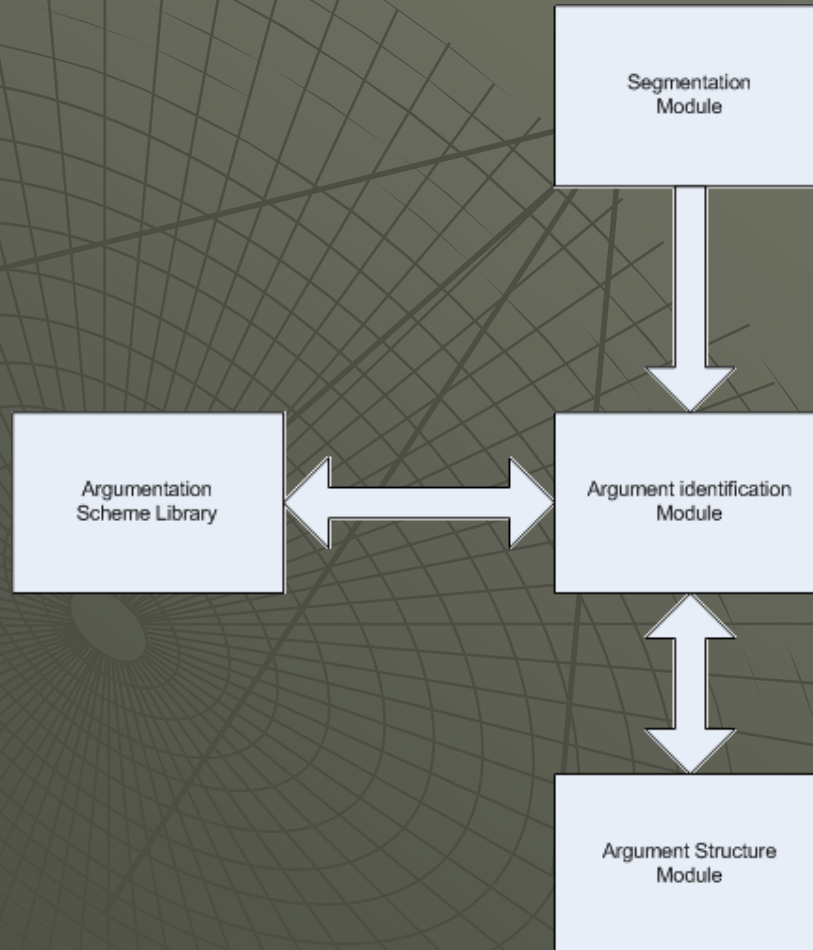
# Identification of argumentation acts

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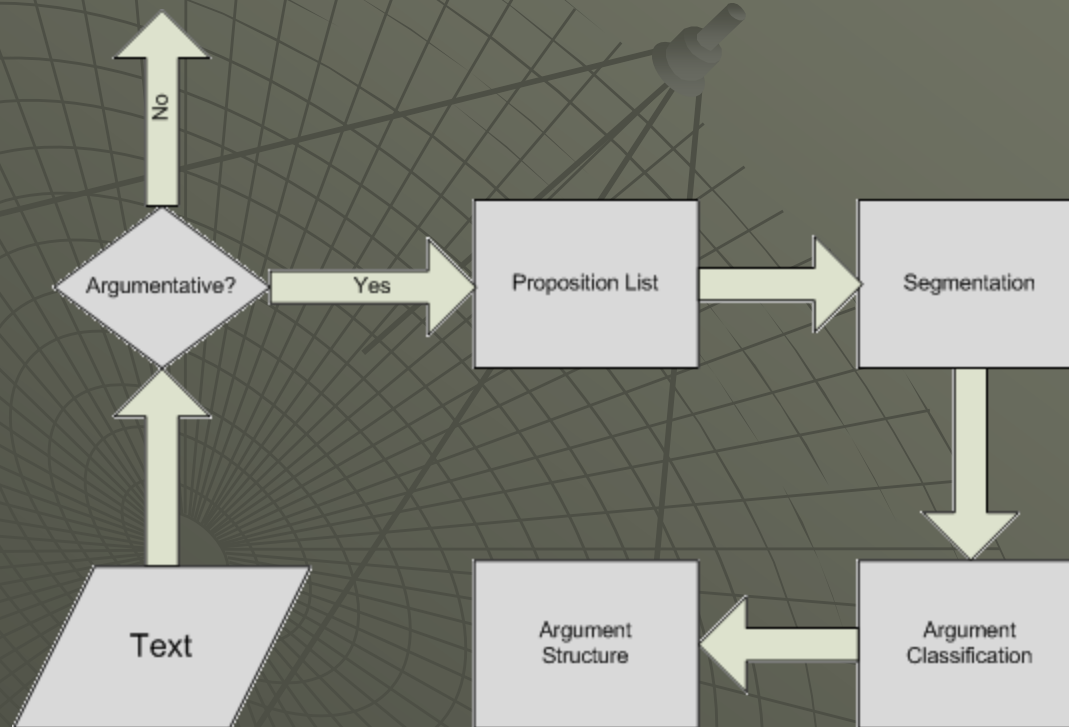
# Contents

- ◆ Software architecture specification
- ◆ Typical dataflow
- ◆ Algorithms
- ◆ Technologies

# Software architecture specification



# Process flow



# Algorithms

- ◆ Maximum Entropy and SVM classifier
- ◆ Bayesian Classifier (with chosen features)
- ◆ Learning algorithm (neural networks)



# Algorithms

- ◆ Features for argument identification
  - ◆ Adverbs (POS Tagger)
  - ◆ Verbs (POS Tagger)
  - ◆ Text statistics
  - ◆ Punctuation
  - ◆ Key words
  - ◆ Parse features

# Algorithms

- ◆ Argument segmentation:
  - ◆ Semantic distance (WordNet)
  - ◆ Similarity function based on the similarities between words

# Algorithms

- ◆ Argument classification(SVM):
  - ◆ Type of Subject (POS Tagger)
  - ◆ Type of Main Verb (POS Tagger)
  - ◆ Article reference
  - ◆ Key patterns
  - ◆ Absolute location



# Technologies

- ◆ Corpus used : Araucaria
- ◆ Language : python and C
- ◆ NLTK, Araucaria scheme library

# Resources

- ◆ Argumentation Mining: The Detection, Classification and Structuring of Arguments in Text - Raquel Mochales Palau, Marie-Francine Moens
- ◆ Study on the Structure of Argumentation in Case Law - Raquel Mochales Palau, Marie-Francine Moens
- ◆ Creating an argumentation corpus: do theories apply to real arguments? - Raquel Mochales Palau, Aagje Ieven
- ◆ Argumentation in Artificial Intelligence – Iyad Rahwan, Gullermo R. Simari