

MB1: Coreference Resolution of Abstract Mentions (CReAM)

Background

When reporting about events, journalists use different words to describe the same actors and entities, often based on personal or the outlet's political or ideological views. News consumers are highly influenced by a non-objective reporting style, which often leads to different assessments and reactions on news events, both by individuals and society. Current state-of-the-art coreference resolution systems still lack of robust approaches to solve mentions of non-named-entity related concepts.

Goal

Develop a novel coreference resolution approach that will identify coreference chains referring to the same abstract concepts.

Tasks

- Review the literature about CoRef and word embeddings;
- Extract verb phrases (VPs) from parsing trees;
- Design features which can be used for unsupervised learning;
- Design an approach that will identify groups of noun phrases and VPs referring to the same concepts;
- Consider a graph-based approach with attraction and repulsion principle
- Evaluate the algorithm in a structured pipeline

CNN	Al Jazeera
UK soldiers cleared in Iraqi death	British murderers in Iraq acquitted
Seven British soldiers were acquitted on Thursday of charges of beating an innocent Iraqi teenager to death with rifle butts.	The judge on Thursday dismissed murder charges against seven soldiers, who are accused of murdering Iraqi teenager.

Anastasia Zhukova
zhukova@uni-wuppertal.de



Felix Hamborg
felix.hamborg@uni-konstanz.de



MB2: Me(r|t)onym Relation Tree of Entities

Background

When reporting about the same event, media outlets tend to use different, often bias-prone, word choices to refer to the same actors, entities or concepts. They either refer to an entity directly, e.g., “illegal aliens” vs. “undocumented immigrants” or indirectly, e.g., “Washington” meaning “U.S. government”. Indirect entity mentions can be metonyms, e.g., when a referent is called with a word associated with it, or meronyms, e.g., when a part of entity represents its whole, e.g., “Russian agents” will refer to “Russia”.

Goal

Develop an algorithm that will create a me(r|t)onym relation tree of entities in a set of news articles.

Tasks

- Research literature about building knowledge graphs and ontologies
- Design features to represent entities
- Develop an algorithm that will build an entity relation tree based on a set of related and weakly related news articles
- Evaluate results on a provided dataset



Anastasia Zhukova
zhukova@uni-wuppertal.de



Felix Hamborg
felix.hamborg@uni-konstanz.de

