Finanziato dall'Unione europea NextGenerationEU

Ministero dell'Università e della Ricerca

Italiadomani
PIANO NAZIONALE DI RIPRESA E RESILIENZA

AI³ 2024

Empowering Public Interest Communication with Argumentation - Project Overview

Pietro Baroni, Stefano Bistarelli, Bettina Fazzinga, Giulio Fellin, Sergio Flesca, Filippo Furfaro, Massimiliano Giacomin, Francesco Parisi, Carlo Proietti, Irene Russo, Francesco Santini, Carlo Taticchi, Paola Vernillo

UNIVERSITÀ DEGLI STUDI DI BRESCIA

A.D. 1308 unipg UNIVERSITÀ DEGLI STUDI DI PERUGIA

UNIVERSITÀ DELLA CALABRIA

Istituto di Linguistica Computazionale "Antonio Zampolli"
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Public Interest Communication

- Goal: promoting the improvement of society through proper public communication

- Example: campaigns to promote appropriate behaviour in front of the COVID-19 emergency

- Very limited use of IT to support PIC in the literature

- EPICA: Computational Argumentation (CA) for PIC

Key questions

1. What aspects of PIC could CA address, and which require advancements beyond the state of the art?

2. How could CA be extended to model and analyse PIC?

3. What methods could be employed to extract relevant information from PIC case studies to apply the developed CA models, and how can we verify these models?

4. What algorithms/software are necessary to implement them?

Planned activities

1. Conceptual analysis and requirement definition
2. Development of formal argumentation models
3. Model-based case analysis and model validation
4. Development of reasoning algorithms and validation tools
5. Communication, dissemination, exploitation

Selecting a case study

- Possible topics to analyse under the lens of PIC and CA:
  - COVID
  - Climate change
  - Promoting a greener diet
- After evaluation (relevance in real world applications, availability of datasets, …) we selected…

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Corpus creation

- Start: October, 17 2024
- Minimal Annotation Scheme [STAB & GUREVYCH 2014]

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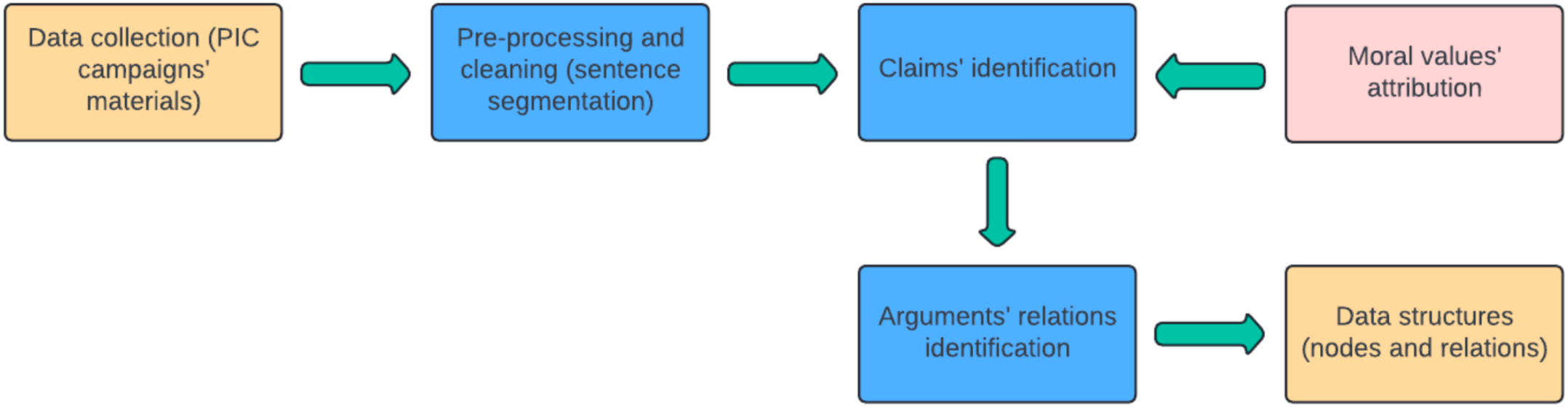
Analysing the arguments

- Possible pipeline for arguments extraction and classification



- Identification of sentences as arguments or not arguments
- Enrich sentences with features like moral values

Modelling requirements

Basic entities
arguments
campaigns
audience

Values [Bench-Capon 2002]
associated to arguments
relationships between them
significance for audience

Argument importance
derive it for arguments
compare campaigns
project importance to values

Argument presentation
operators of modification
presentation patterns
analysis and evaluation

Argument relationships
subargument, attack, support
premises, goals, actions
derive relationships

Temporal dimension
campaign over time
changes over time
representation of events

Argumentation schemes
communication strategies
combinations of schemes
evaluation of campaign

Argument source
effects on the credibility
causes affecting credibility

Planned activities (cont'd)

1. Conceptual analysis and requirement definition

2. Development of formal argumentation models

- Model crucial aspects of PIC (coherence, persuasiveness)
- Manage long-term communication strategies
- Analyse and improve PIC campaigns

Planned activities (cont'd)

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Website: epica.dmi.unipg.it

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