Seminar Topics: Information Extraction

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Language and Attitude Change: Argumentation

- **Argument mining:** task of automatic extraction and identification of argumentative structures from natural language text
- **Argumentative structures include:** Premise, Conclusions, Scheme and the relationship between the main and subsidiary argument
- **Applications:** qualitative assessment of **social media content**, legal documents, product reviews, scientific articles, online debates, newspaper articles and dialogical domains
- **Challenges:** wide variety of text genres, lack of large data, lack of consistently **annotated argument data**, high cost of annotation.

Argument mining in Wikipedia, Argument Mining: A Survey

Language and Attitude Change: Argumentation

1. Argument Classification and Clustering
   - Reimers et al., 2019, **Classification and Clustering of Arguments with Contextualized Word Embeddings**, In *Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics*

2. Multi-Task Learning for Argument Mining
   - Schulz et al., 2018, **Multi-Task Learning for Argumentation Mining in Low-Resource Settings**, In *Proceedings of the 2018 Conference of the North American Chapter of the Association for Computational Linguistics*
   - Morio et al., 2022, **End-to-end Argument Mining with Cross-corpora Multi-task Learning**, In *Transactions of the Association for Computational Linguistics*

3. Transfer Learning for Argument Mining
   - Hua et al., 2022, Efficient Argument Structure Extraction with Transfer Learning and Active Learning, In *Findings of the Association for Computational Linguistics*

Language and Attitude Change: Deception

- **Deception detection** or lie detecting is a task of identifying deceptive behaviors
- Motivated by the rapid growth of **deception detection applications** not only in **web content**, including product reviews, online dating profiles, and social media posts, but also in **our daily conversations**, including advertisements, court testimonies, and interactions in lie games
- Different from **fact-checking** and **misinformation detection**
- Deception does not only involve verbal communication, but also manifests itself through various **non-verbal signs**.

Language and Attitude Change: Deception

1. Deception Detection
   - Fornaciari et al., 2021, **BERTective: Language Models and Contextual Information for Deception Detection**, In *Proceedings of the 16th Conference of the European Chapter of the Association for Computational Linguistic*

2. Explainable Deception Detection
   - Ilias et al., 2022, **Explainable Verbal Deception Detection using Transformers**, In *ArXiv*

3. Multimodal Deception Detection
   - Soldner et al., 2019, **Box of Lies: Multimodal Deception Detection in Dialogues**, In *Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics*
   - Bai et al., 2022, **POLLY: A Multimodal Cross-Cultural Context-Sensitive Framework to Predict Political Lying from Videos**, In *ICMI '22: Proceedings of the 2022 International Conference on Multimodal Interaction*

Language and Attitude Change: Persuasion

- **Persuasion** is an activity that involves one party trying to induce another party to believe or disbelieve something or to do (or not do) something
- Predicting the persuasion strategy can help users **make better decisions**
- Developing intelligent persuasive conversational agents can **change people's opinions and actions for social good**
- The **lack of training data set specially annotated data set** is the major reason to the limited exploration of persuasion strategy detection.

Language and Attitude Change: Persuasion

1. Persuasive Argument Mining
   - Chakrabarty et al., 2019, **AMPERSAND: Argument Mining for PERSuAsive oNline Discussions**, In *Proceedings of the 2019 Conference on Empirical Methods in Natural Language Processing*

2. Persuasion for Social Good
   - Wang et al., 2019, **Persuasion for Good: Towards a Personalized Persuasive Dialogue System for Social Good**, In *Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics*

3. Semi-Supervised Persuasion Strategies Prediction
   - Yang et al., 2019, **Let's Make Your Request More Persuasive: Modeling Persuasive Strategies via Semi-Supervised Neural Nets on Crowdfunding Platforms**, In *Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics*
   - Chen et al., 2021, **Weakly-Supervised Hierarchical Models for Predicting Persuasive Strategies in Good-faith Textual Requests**, In *Proceedings of the AAAI Conference on Artificial Intelligence*