Advanced Topics:

Information Retrieval
Natural Language Processing
- The branch of computer science focuses on developing systems that allow computers to communicate with human natural language.
- The process of computer analysis of input provided in a natural language, and conversion of this input into a useful form of representation.
- Application: e.g., Machine Translation.
Information Retrieval (IR) is finding material (usually documents) of an unstructured nature (usually text) that satisfies an information need from within large collections (usually stored on computers).

Application: e.g., Search Engine.
What can we do with NLP and IR?
- Discourse Analysis.
- Sentiment Analysis.
- Argumentation Mining.
- Word Embedding.
- Automated Essay Scoring.
- Clustering of News Articles.
- Relation Extraction.
- Textual Entailment.
- Wikipedia in IR and NLP.
- Multi-document Summarization.
- Computational Ethics.
- Known-item Refinding.
- Justification for Recommendations.
Choosing a Topic

30 min

Paper Presentation

45 min

Lab Presentation

30 min

Seminar
Deliverables

Topic Presentation

- Definition
- Examples
- Models
- Applications

Paper Presentation

- The Problem
- Motivation
- Main contribution
- Method
- Exp. and Results
- Future work

Lab Presentation

- The Problem
- Implementation
- Exp. and Results
Policy

- Attendance is obligatory.
- Each student should give three talks.
- Simple implementation of IR/NLP method.
- Grad is based on your performance in the lab and presentation.
Next meeting:
  • Our group will give you short introductions about IR and NLP.
  • You will have three topics from the list you are interested in.

Next ...
  • Topic presentations.
  • Paper presentations.
  • Lab presentations.

Dates for the seminar talks are to be determined.
Questions