



COMPUTATIONAL LINGUISTICS FOR DISCOURSE ANALYSIS

Introduction

1ST SESSION

1 Syllabus & Schedule

2 Grading

3 Goals

4 Introduction and Overview

5 Homework

6 Contact Information

SCHEDULE

Date: 2025	Subject
16.10	Introduction
23.10	(Computational) Discourse Analysis
30.10	Data Exploration and Analysis
06.11	Processing and Parsing
13.11	Words as Vectors
20.11	Text Classification and Topic Modelling
27.11	Named Entity Recognition (NER)
04.12	Sentiment Analysis
11.12	Presentation Guidelines
18.12	Tutorial

SCHEDULE

Date:2026	Subject
15.01	Deep Learning in NLP I
22.01	Deep Learning in NLP II
29.01	Presentation I
05.02	Presentation II
12.02	Term Paper Guidelines

GRADING

- **Presentation 20%** (*everyone*)

29th January and 05th of February

- **Assignments 30%** (*everyone*)

- **Term Paper 50%**

Enrolled for

❖ 10 CP: 2000 words

❖ 5 CP: 1000 words

➤ **Your active participation will make a difference:** If you're on in between two grades, it will positively influence your final grade.

GOALS

- Understanding core ideas in Computational Linguistics (CL)
- Explore the interface between CL and Discourse
- Practice interdisciplinary thinking

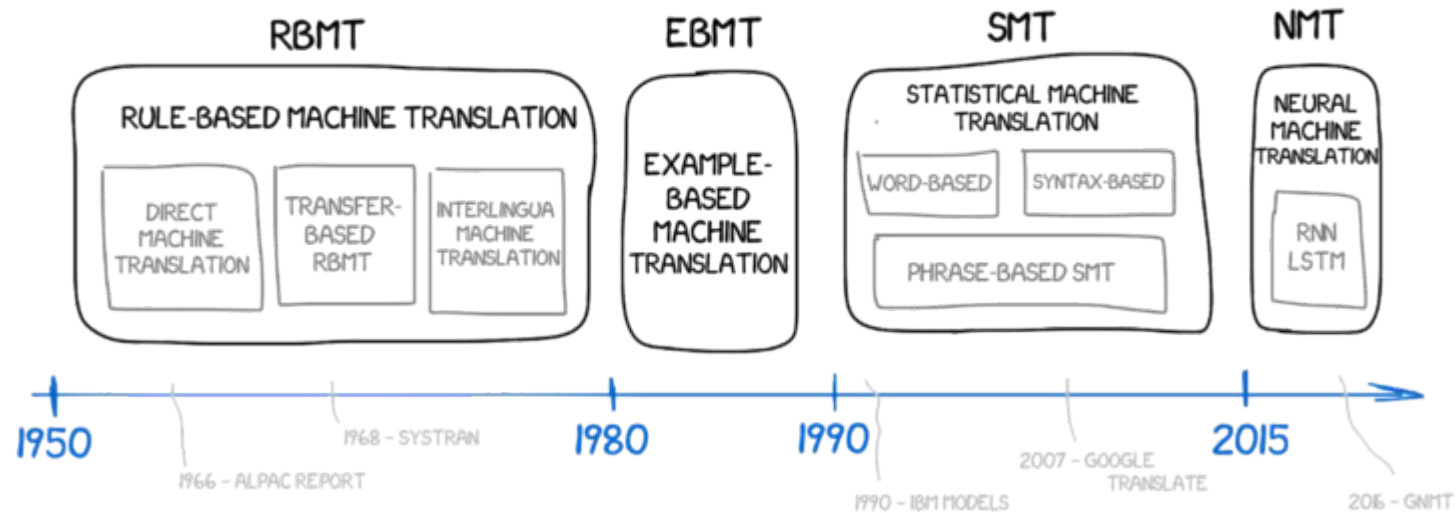
INTRODUCTION AND OVERVIEW

➤ Computation Linguistics (CL)

- Combines linguistics and computer science
- Relies on formal linguistic theories
- Recognition, Interpretation, and production of language

INTRODUCTION AND OVERVIEW

Machine Translation



January 7, 1954, Georgetown-IBM experiment

INTRODUCTION AND OVERVIEW

➤ Natural Language Processing (NLP)

- Allows computers to process, understand, and generate human language
- Relies on statistical and probabilistic methods to recognise patterns in large amounts of text data

INTRODUCTION AND OVERVIEW

➤ Overlap

- *Reliance on text data*: Annotation and insights give rise to larger datasets
- *Shared tools and methods*: Parsing, statistical modelling, Machine Learning,...
- Understanding and processing human language

INTRODUCTION AND OVERVIEW

➤ Potential Conflict

- Reaction to ambiguity
- Theoretical vs Practical Focus

Original	Stemming	Lemmatization
New	New	New
York	York	York
is	is	be
the	the	the
most	most	most
densely	dens	densely
populated	popul	populated
city	citi	city
in	in	in
the	the	the
United	Unite	United
States	State	States

Stemming vs Lemmatization

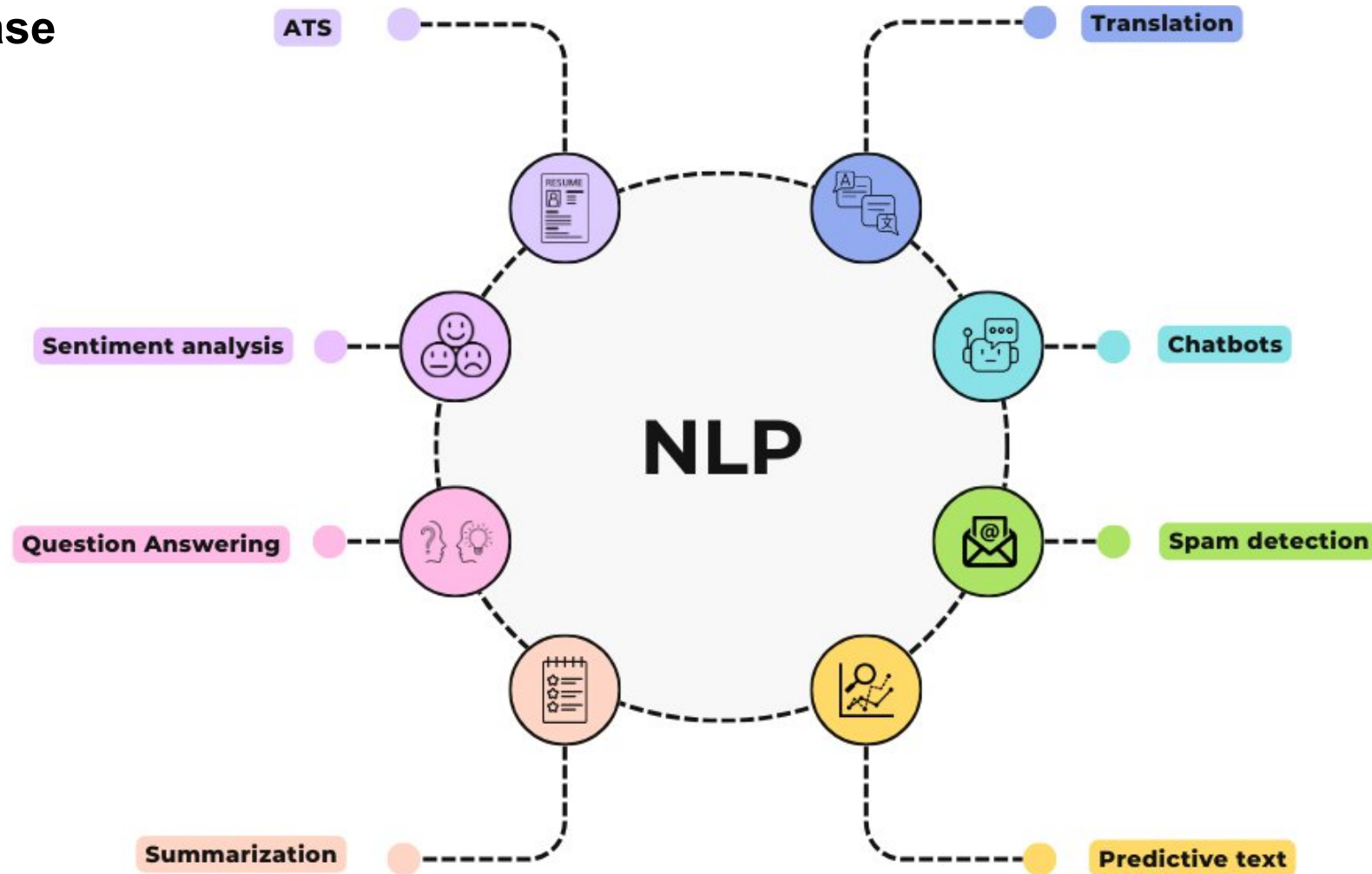
INTRODUCTION AND OVERVIEW

➤ Real life use case?



INTRODUCTION AND OVERVIEW

➤ Real life use case



HOMEWORK

➤ **Please ensure you complete the mandatory reading for next week; *the optional reading is available for those who wish to explore the topic in more depth.***

➤ **Please upload 1–2 discussion points about the paper by Wednesday, one day before our next session.**

These points will form the basis of our seminar discussion and can include questions, critiques, further ideas, application examples, personal experiences, etc.

HOMEWORK

Examples from previous semesters:

1. Can we use the traditional methods of discourse analysis to create an automated analysis of discourse?
2. In the last semester I and my colleagues prepared a presentation devoted to the speech act theory and one of the most tricky points was a problem how to interpret requests and how to express politeness in different languages. In my opinion, an interactional sociolinguistic approach could be suitable here.
3. "Cook (1989) also acknowledges that speech act theory enables us to see how meaning has become more and more slippery. Indirection, according to him, is something which human beings exploit to their advantage. It enables them to avoid committing themselves and to retreat in front of danger; and this is one of the major reasons why people speak indirectly" --> Can we elaborate on this? What examples are there in which humans "avoid committing themselves" or "retreat in front of danger" through indirection?
4. They claim text produced by professional linguists are "unnatural", thus only conversation talk should be considered for discourse analysis. In what category would hybrid texts such as in chats or in social media fall?

CONTACT INFORMATION

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