Applications of NLP

Presented by: Aftab Harun (19CO23)

ⓘ Information available in audio.

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Agenda

- Overview

- NLP

- Applications

NLP

Natural Language Processing

A subfield of linguistics, computer science, and artificial intelligence concerned with the interactions between computers and human language,

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Applications

MACHINE TRANSLATION (MT)

- MT Textual or oral
- Different degrees of human interventions

INFORMATION RETRIEVAL (IR)

- Text, Speech, Structured Information
- Information according to the users need

QUESTION ANSWERING (Q&A)

- Natural extraction of IR

INFORMATION EXTRACTION (IE)

- Extracting useful information from free text
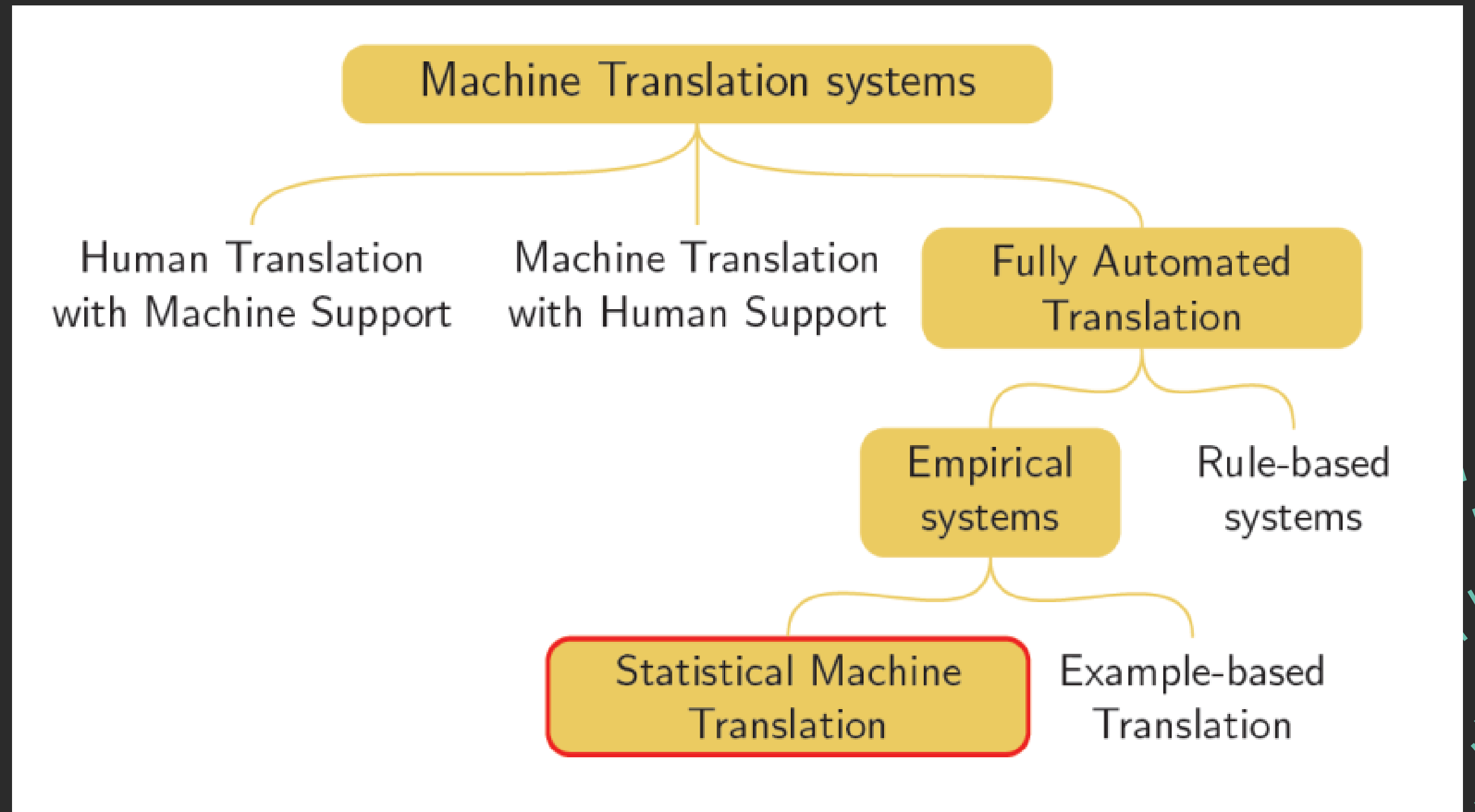- MUC, ACE, TAC challenges

Machine Translation

- Process of translating a text from a source language to a target language preserving some properties
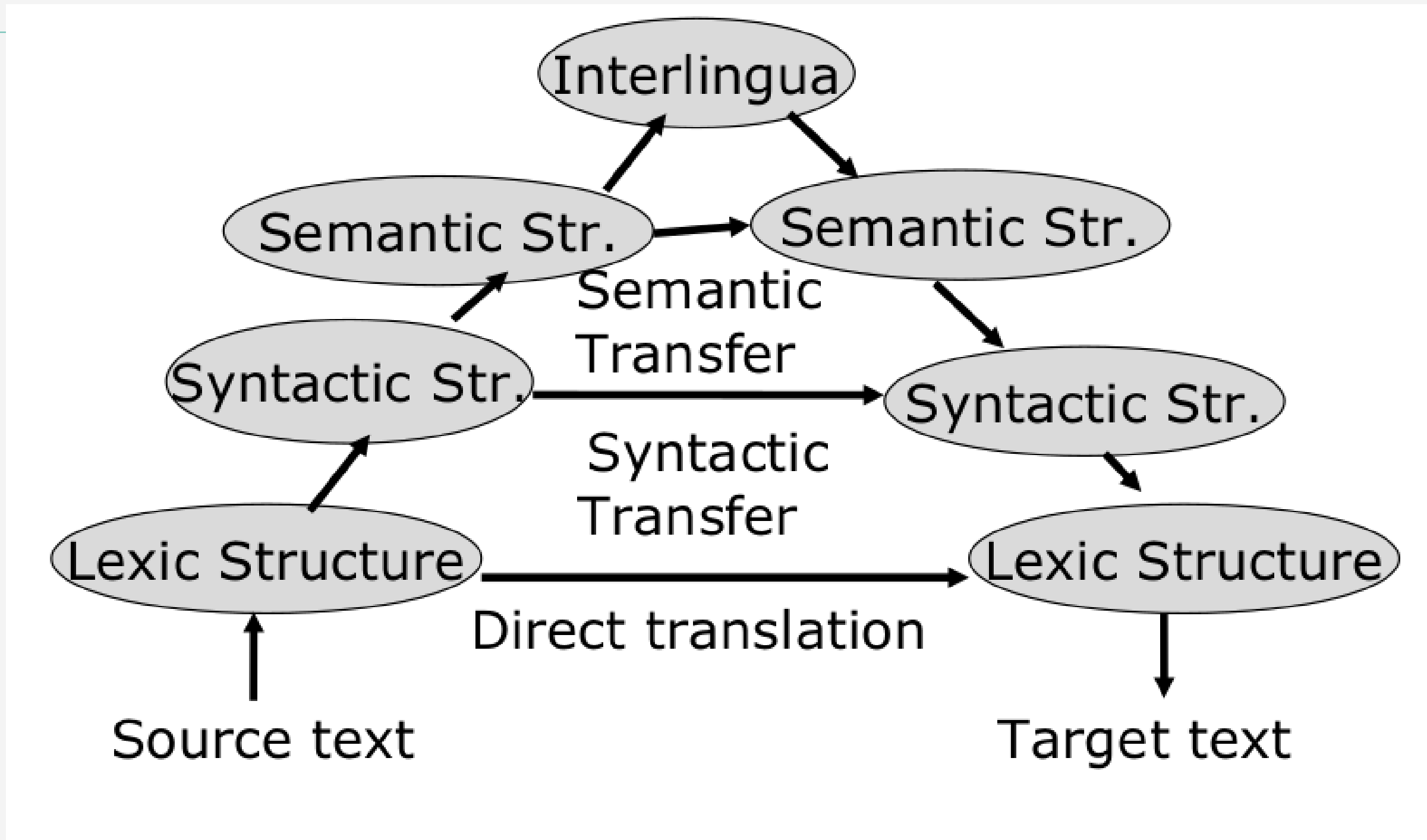
    The main property to preserve (bu not only)
    is the **meaning**

- MT textual vs oral
- Different Degrees of Human intervention

MACHINE TRANSLATION

Machine Translation systems

Human Translation with Machine Support

Machine Translation with Human Support

Fully Automated Translation

Empirical systems

Rule-based systems

Statistical Machine Translation

Example-based Translation

Machine Translation

QUESTION ANSWERING

- Natural extension of IR
- A QA system receives a query expressed in NL and tries to provide not a document containing the answer but the proper answer
- QA system need to use the NLP techniques for both precessing the question and looking for the answer.

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Question Answering

Some QA systems that can be accessed through the web

- Webclopedia
  http://www.isi.edu/natual-language/projects/webclopedia
- AskJeeves
  http://www.ask.com
- LCC
  http://www.languagecomputer.com

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Thank you :)