NL search for semantic web

First Progress Presentation

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Look Back

- **Problem:**
    - Searching in semantic sources requires special knowledge (SPARQL, …)
    - General users cannot gain any benefit from such data sources

- **Solution**:
    - Creation of an interface which translates natural language searches into semantic web queries to run against data pools like dbpedia.org
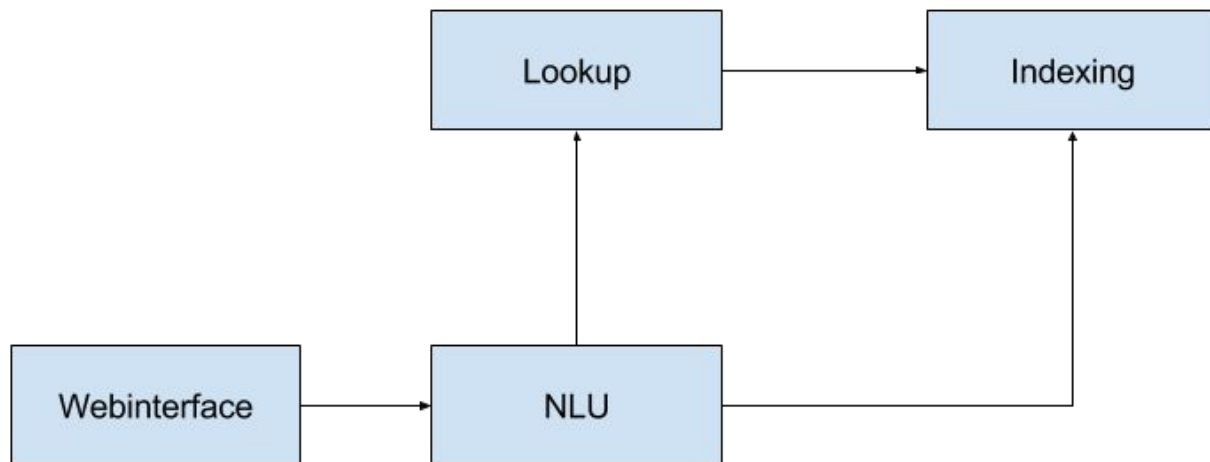
Milestones

- Identifies parts of speech in the given input.
- Converts given query into semantic web searchable queries.
- Gets information from semantic data sources.
- Converts the information from machine readable to human readable form.

Architecture

Stanford Part-Of-Speech Tagger

- Assigns parts of speech to each word

  What is the capital of Germany?

- Advantage:
  - Already well trained

- Disadvantage:
  - No determination of subject, predicate and object

Rasa NLU

- NLU by own definition

  What is the <mark>capital</mark> *of* <mark>Germany</mark>?

- Advantage:
  - Own defined determination
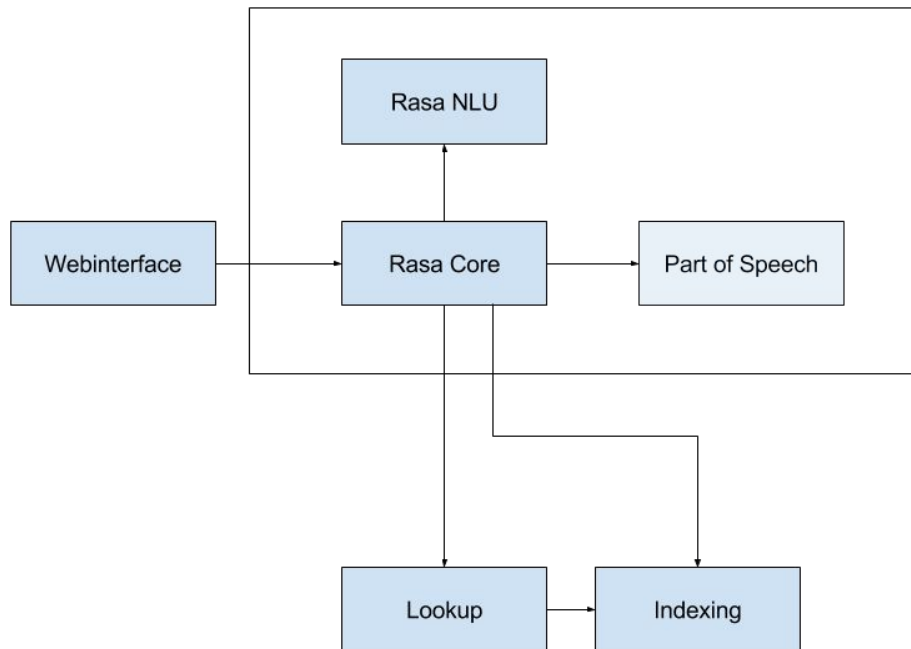
- Disadvantage:
  - Requires training data

Rasa NLU & Core

- Define own catalog of questions for a specific topic
- Create training data for that catalog

- Rasa Core as central component

Architecture

Prototype Demo

Roadmap

- Extending the catalog of questions.
- Implementing fallback Part of speech

- Identifies parts of speech in the given input.
- Converts given query into semantic web searchable queries.
- Gets information from semantic data sources.
- Converts the information from machine readable to human readable form.

Responsibilities

- Lukas Kleine Büning
  - NLU

- Pichaya Kanjanapisith
  - Lookup, Indexing

- Yuchun Chen
  - Webinterface, Indexing

- Venkat
  - Indexing

Thank you for your attention!