Universal Semantic Annotator
Unified API for WSD, SRL and AMR Parsing

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Three Natural Language Understanding tasks

Word Sense Disambiguation (WSD) is the task of associating a word in context with its correct meaning from a finite set of possible choices.

* The quick brown *fox* jumps over the lazy dog.
  * fox.n.01: carnivorous mammal with ...
  * fox.n.02: a shifty deceptive person.
  * fox.n.03: the grey or reddish-brown fur of a fox.
  * fox.n.04: ...

Semantic Role Labeling (SRL) answers “Who did What to Whom, Where, When?”

* The quick brown fox jumps over the lazy dog.
  * Theme (What)
  * Predicates
  * Agent (Who)
  * Path (Where)
  * Argument (What)
  * Object (To Whom)

Abstract Meaning Representation (AMR) parsing provides a semantic graph structure of a sentence.

* You told me to wash the dog.
  * Theme (What)
  * Agent (Who)
  * Path (Where)
  * Argument (What)
  * Object (To Whom)

What USEA offers

The quick brown fox jumps over the lazy dog.

USEA architecture infrastructure

How to use USEA

Web Interface

USEA
The First Unified API for WSD, SRL and Semantic Parsing

Results and Comparisons

F1 score on English benchmarks

Zero-Shot performance on multilingual benchmarks

F1 score on multilingual benchmarks

AMR Parsing

SMATCH score on English benchmarks

SMATCH score on multilingual benchmarks

Python SDK

```
import requests
text = "The quick brown fox jumps over the lazy dog."
response = requests.post("https://nlp.uniroma1.it/usea/api/",
headers={"type":"text","content":text})
```

Remote Endpoint

```
# /bin/bash
# install the CLS python package
pip install cls

# free text request
service = service.FREE_TEXT
request = text = "The quick brown fox jumps over the lazy dog."
result = service(request, request_type=cls.RECIPIENT)

# local deployment

```

Local Deployment

```
# /bin/bash
# clone the official repository
git clone https://github.com/SapienzaNLP/usea
usea
# run the docker compose file
docker-compose up -d
```

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