

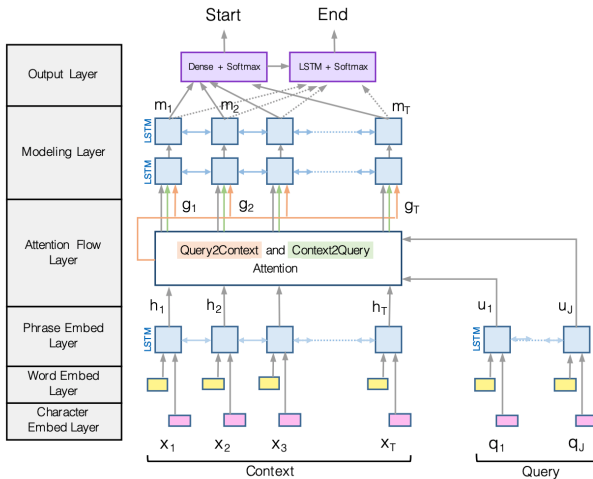


Adapted from material from Danqi Chen

Question Answering

Natural Language Processing: Jordan Boyd-Graber
University of Maryland
BIDAF

BiDAF



AllenNLP

- Simple interface for state-of-the-art models
- Pretrained models
- Good pipeline for experiments

Installing (optional)

```
sudo pip install allennlp  
sudo pip install allennlp_models
```

Get Data

```
wget -nc https://obj.umiacs.umd.edu/processed_tossup/qanta.dev.paragraphs.2018.04.18.jsonl.zip  
python3 -m json.tool qanta.dev.paragraphs.2018.04.18.jsonl | less
```

Run BiDAF Model

```
from allennlp_models import pretrained
predictor = pretrained.load_predictor("rc-bidaf")

infile = open("qanta.dev.paragraphs.2018.04.18.jsonl.zip")
questions = json.load(infile)
for qq in questions['questions']:
    first_sentence = qq['first_sentence']
    for pp in qq['annotated_paras'][0]:
        pred = predictor.predict(passage = pp["paragraph"],
                                question = first_sentence)
```

Exercises

- Take a look at a prediction object. What's the answer?
- How could you tell if this matches the reference answer?
- Find some examples of things that it gets right or wrong
- Are some of the issues fixable?

Examples

Question

The first mayor of this city, Christopher Cato, names a manor which saw the Beer Hall Riots when this city tried to pass an ordinance on beer brewing.

It was formed when Indian

market gardeners came to settle **in** the area some time after it was given

+++

to George Christopher Cato **in** 1865 , who was the first mayor of Durban

in 1854 .

Examples

Question

This man made models for a garden city called Broadacre City.

He continued

developing the idea until his death. Concurrent **with** the development of
+++

City , also referred to **as** " Usonia " , Wright conceived a new **type** of
dwelling that came to be known **as** the Usonian House .

Examples

Question

This ruler's brother Thankmar revolted against him before being defeated in Eresburg.

to subdue the Slavic Lutici tribes **in** what was to become the Billung March
+
*
beyond the Elbe River . He thereby disregarded the claims of Herman 's
+++

elder brother Wichmann , who **in** turn joined the failed revolt by Otto 's
half - brother Thankmar .