

```

graph LR
    1[ ] --> 2[ ]
    2 --> 3[ ]
    3 --> 4[ ]
    4 --> 5[ ]
    5 --> 6[ ]
    6 --> 7[ ]
    7 --> 8[KG]
    8 --> 3
    4 --> 8
  
```

$k \in$

entity linker  
①

span-rep  
entity-rep

$\oplus$

$\text{att}^n$   
 $\text{span-att}^n$

enhanced contextual embed

$\rightarrow$

$\{ \text{NER results} \}$

Contextual embed

disambiguator  $\rightarrow$  link score  $\rightarrow$  KG loss  
 (3) gold entities

The diagram illustrates the architecture of the Named Entity Recognition model. It shows the flow of information from inputs to outputs. The inputs are entity embedding, contextual embedding, and candidate spans. These inputs feed into a span extractor (4), which produces a span representation (span rep). This span rep then feeds into a Bi-Encoder (1), which produces another span representation (span rep). This second span rep then feeds into a datamixer (6), which produces a span representation (span rep), a weighted-entity-rep, and a contextual embedding. The datamixer also receives entity-priors as input. The final outputs are span rep, weighted-entity-rep, and contextual embedding.

6.27 周-

knowBert流程.

找吧

108.2 106.2

110 ~ 120

1. entity-vocab + entity-embedding  $\rightarrow$  entity linker  $\rightarrow$  entity disambiguation  $\rightarrow$  Span Extractor  
Dot Attention Prior  
BERT Encoder

☑ knowBert输入? ALDA-NLL

☑ input-id? entity-id? (input, entity, span)

☐ entity linker怎么算? (given input, entity, span, 计算

☐ entity embedding 怎么算?

☐ ALDA-NLL 数据集了解.

☐ Wikidata relations embedding 怎么算?

☐ Selector 作用? 是啥? 啥?

☐ 还要看 forward.

☐ 由于 tokens 怎么算? 使用 in Bert embedding 无, 咋得有 token 吧?

☐ Candidate-sequence-ids 作用? 为啥要留?

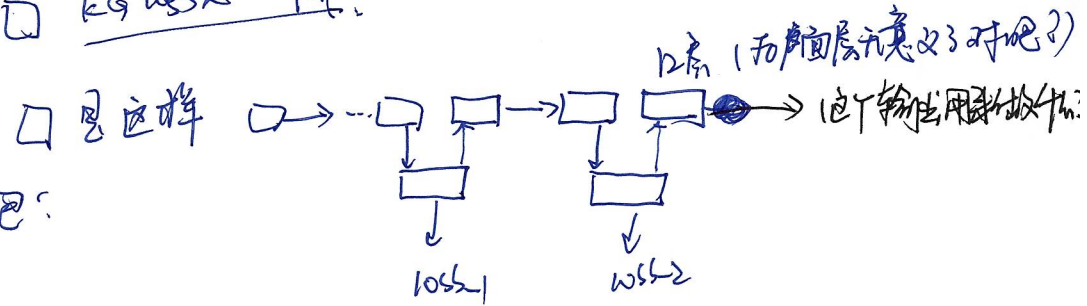
☐ 以下 entity linker 和 KG 和 KB

☐ contextual embedding 的 subword 对吧?

link score 与 entity id, 这个 link-score 的 weight 将 entity embedding sum  
起来然后和 实体作 attn,  $q, k, v$  in  $k, v$ .

☐ span mention 怎么算? 取几个 mention? mention-span 的  
word level 是吧? 从 context embedding 中取 is?

☐ KG 怎么算?



☐ KB in output 怎么算?

☐ 本意是持平 embed(entity & bert) 之间的差距  
(建立一个桥)

☐ KG