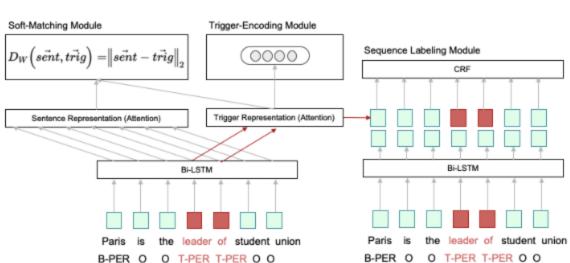# Training

$$(1-Y)\frac{1}{2}(D_W)^2 + (Y)\frac{1}{2}\{\max(0, m-D_W)\}^2 \quad + \quad -\log(\mathbf{y})$$

Soft-Matching Module

$$D_W\left(\vec{sent}, \vec{trig}\right) = \left\|\vec{sent} - \vec{trig}\right\|_2$$

Trigger-Encoding Module

$\bigcirc\bigcirc\bigcirc\bigcirc$

Sequence Labeling Module

CRF

Sentence Representation (Attention)

Trigger Representation (Attention)

Bi-LSTM

Bi-LSTM

| Paris | is | the | leader | of | student | union |
| B-PER | O | O | T-PER | T-PER | O | O |

| Paris | is | the | leader | of | student | union |
| B-PER | O | O | T-PER | T-PER | O | O |

Decoding

Trigger Representations

1. Leader of
2. Affected by
3. Infer with
   ...

Sequence Labeling Module

CRF

Soft Matching

$$D_W\left(\vec{sent}, \vec{trig}\right) = \left\|\vec{sent} - \vec{trig}\right\|_2 \quad > \theta$$

Sentence Representation (Attention)

Bi-LSTM

| Trump | is | the | president | of | USA |