

Configuration#1

Corpus Preprocessing: None

Word Representation: Word vectors trained on corpus initializing with pretrained vector

Entity Context Window: Left 10 words, Right 10 words

Entity Representation Type: Context words and words in Entity

Type Representation: Learned vector by replacing entities by tag where words are initialized with pretrained vector

Ranking mechanism: Entity words Centroid and cosine distance with Type vector

Results:

Role	Precision@1	Precision@2	Precision@3
LOC_Event	60.78 %	63.42 %	66.26 %
LOC_Accused	26.71 %	29.45 %	32.87 %
LOC_Victim	22.95 %	28.69 %	42.08 %
LOC_Others	55.97 %	60.53 %	63.74 %
ORG_Accused	56.66 %	65.52 %	68.12 %
ORG_Victim	48.57 %	55.00 %	58.09 %
ORG_Others	79.03 %	81.78 %	84.92 %
PER_Victim	47.56 %	60.36 %	65.04 %
PER_Others	86.88 %	86.83 %	86.61 %
PER_Accused	60.68 %	65.52 %	70.46 %
Average	54.58 %	60.21 %	63.81 %

Configuration#2

Corpus Preprocessing: None

Word Representation: Word vectors trained on corpus initializing with pretrained vector

Entity Context Window: Left 10 words, Right 10 words

Entity Representation Type: Context words and words in Entity

Type Representation: Learned vector by replacing entities by tag where words are initialized with pretrained vector

Ranking mechanism: Goup average agglomerative among Entity word vector and Type vector

Results:

Role	Precision@1	Precision@2	Precision@3
LOC_Event	44.25 %	48.63 %	54.36 %
LOC_Accused	32.19 %	35.27 %	40.87 %
LOC_Victim	31.15 %	50.00 %	55.74 %
LOC_Others	63.28 %	66.35 %	67.86 %
ORG_Accused	47.71 %	55.31 %	59.37 %
ORG_Victim	32.86 %	50.00 %	57.62 %
ORG_Others	79.80 %	81.12 %	83.61 %
PER_Victim	46.34 %	54.27 %	63.41 %
PER_Others	79.37 %	80.57 %	81.84 %
PER_Accused	62.76 %	67.93 %	74.25 %
Average	51.97 %	58.94 %	63.89 %

Configuration#3.1

Corpus Preprocessing: None

Word Representation: Word vectors trained on corpus initializing with pretrained vector

Entity Context Window: Left 10 words, Right 10 words

Entity Representation Type: Context words and words in Entity

Type Representation: 30 Similar words to the learned type vector by replacing entities by tag where words are initialized with pretrained vector

Ranking mechanism: Goup average agglomerative among Entity word vector and Type vector

Results:

Role	Precision@1	Precision@2	Precision@3
LOC_Event	46.88 %	53.40 %	57.90 %
LOC_Accused	11.64 %	20.89 %	27.62 %
LOC_Victim	22.95 %	28.69 %	38.80 %
LOC_Others	65.82 %	65.77 %	68.54 %
ORG_Accused	46.25 %	55.31 %	60.97 %
ORG_Victim	35.71 %	45.71 %	57.62 %
ORG_Others	79.14 %	80.90 %	83.92 %
PER_Victim	46.95 %	52.44 %	61.99 %
PER_Others	82.24 %	82.42 %	83.75 %
PER_Accused	58.96 %	67.59 %	75.05 %
Average	49.65 %	55.31 %	61.61 %

Configuration#3.2

Word Representation: Word vectors pretrained. If word not present initialize with 0 vector

Results:

Role	Precision@1	Precision@2	Precision@3
LOC_Event	50.93 %	54.76 %	58.63 %
LOC_Accused	17.12 %	20.20 %	26.25 %
LOC_Victim	16.39 %	22.95 %	27.32 %
LOC_Others	60.63 %	63.60 %	67.40 %
ORG_Accused	44.375 %	51.25 %	59.09 %
ORG_Victim	38.57 %	51.43 %	61.43 %
ORG_Others	79.80 %	83.04 %	84.59 %
PER_Victim	51.83 %	53.66 %	62.19 %
PER_Others	82.45 %	84.62 %	85.26 %
PER_Accused	58.07 %	59.31 %	64.71 %
Average	50.16 %	54.48 %	59.68 %

Configuration#3.3

Word Representation: Word vectors trained on corpus using 1-hot vector.
If word not present initialize with 0 vector

Results:

Role	Precision@1	Precision@2	Precision@3
LOC_Event	52.03 %	57.23 %	62.32 %
LOC_Accused	14.38 %	20.54 %	27.62 %
LOC_Victim	27.87 %	39.34 %	45.35 %
LOC_Others	62.01 %	64.45 %	65.96 %
ORG_Accused	47.29 %	55.83 %	60.42 %
ORG_Victim	41.43 %	45.00 %	56.19 %
ORG_Others	79.03 %	80.73 %	83.42 %
PER_Victim	45.73 %	50.00 %	58.54 %
PER_Others	82.43 %	83.01 %	84.50 %
PER_Accused	57.24 %	63.79 %	69.77 %
Average	50.94 %	55.99 %	61.41 %