

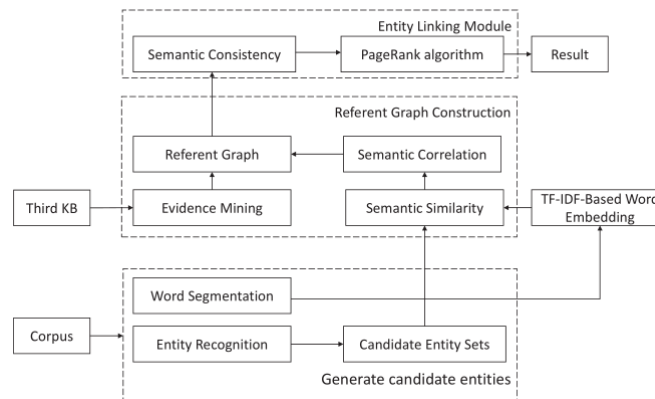
# Graph-ranking collective Chinese entity linking algorithm

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# Problems & Ideas

- Problems of Chinese Entity linking
  - The limitation of current method is that only one entity mention of the text is linked to KB at a time and leads to the poor computational efficiency.
  - Semantic relatedness of co-occur entities in the context is ignored.
- Ideas: A Graph-ranking Collective Chinese Entity Linking Algorithm
  - The entity-relationship graph and incremental evidence can better capture semantic information of context and improve accuracy of entity Linking.
  - A new context similarity measure method and a improved PageRank algorithm are proposed.



# Main Contributions

- **Experimental Results on NLP&CC Corpus (%)**

Method	<i>Precision</i>	<i>Recall</i>	$F_1$	<i>Accuracy</i>
WTCosSim	79.46	81.28	80.36	80.57
CASIA_EI	86.62	84.56	85.58	88.50
Babelfy	78.06	70.42	75.93	70.42
GRCCEL	89.39	88.74	89.06	89.13

- **Experimental Results on Short News Corpus (%)**

Method	<i>Precision</i>	<i>Recall</i>	$F_1$	<i>Accuracy</i>
Baseline	44.72	46.39	45.54	49.08
WTCosSim	78.67	79.22	78.94	78.77
Babelfy	70.17	73.51	71.80	74.63
GRCCEL	86.27	88.93	87.58	86.40

- **Experimental Results on Sogou NED Corpus (%)**

Method	<i>Precision</i>	<i>Recall</i>	$F_1$	<i>Accuracy</i>
Baseline	43.68	39.64	41.56	47.73
WTCosSim	73.50	70.28	71.85	74.29
Babelfy	63.67	65.17	64.41	64.18
GRCCEL	88.12	89.34	88.73	88.67

- **F1-values under different  $\lambda$  on 30 short news documents**

