

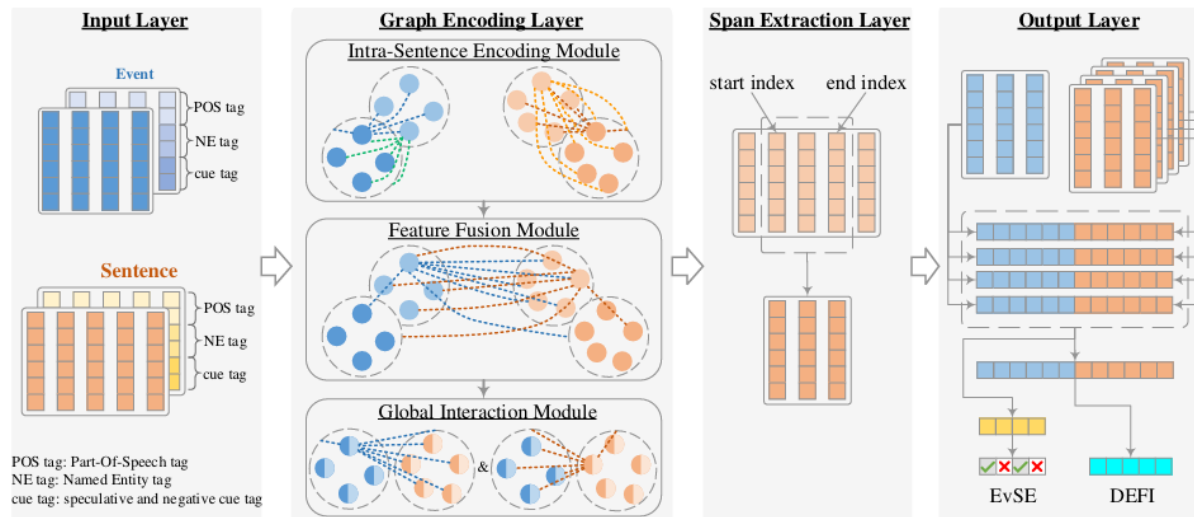
# A multi-view heterogeneous and extractive graph attention network for evidential document-level event factuality identification

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# Problems & Ideas

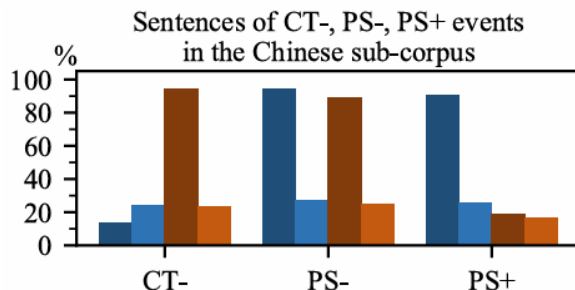
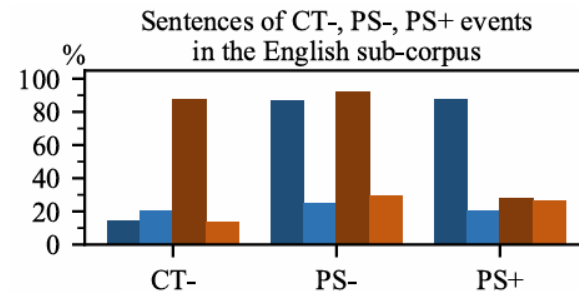
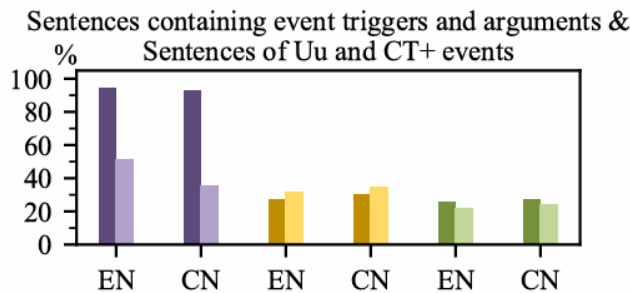
- Problems of Document level Event Factuality Identification:
  - Existing methods rely heavily on specific annotated texts.
  - Existing methods just extract arguments, rather than the correct sentence-/document-level factuality.
  - Existing methods is quite coarse-grained on extracting evidences.
- Ideas: A fine-grained and interpretable model named HEGAT that considers multi-granularity & multi-view fusion and integrates lexical features and span extraction.



The overall architecture of Heterogeneous and Extractive Graph Attention Network (HEGAT), which includes Input Layer, Graph Encoding Layer, Span Extraction Layer and Output Layer.

# Main Contributions

- Contributions:
  - A novel graph network HEGAT that considers multi-granularity and multi-view fusion involving token-level, sentence-level and document-level on EvDEFI task for the first time;
  - A study on the interpretability of EvDEFI by integrating lexical features;
  - Experimental results on EB-DEF-v2 show that HEGAT can achieve the State-Of-The-Arts compared with baselines.



Percentage of **evidential** / **non-evidential** sentences containing event triggers and arguments

Percentage of **evidential** / **non-evidential** sentences containing speculative or negative cues for Uu events

Percentage of **evidential** / **non-evidential** sentences containing speculative or negative cues for CT+ events

Percentage of **evidential** / **non-evidential** sentences containing speculative cues for CT-, PS-, PS+ events

Percentage of **evidential** / **non-evidential** sentences containing negative cues for CT-, PS-, PS+ events

Distributions of evidential and non-evidential sentences containing event triggers, arguments, speculation and negation. “EN/CN” means “English/Chinese sub-corpus”.