

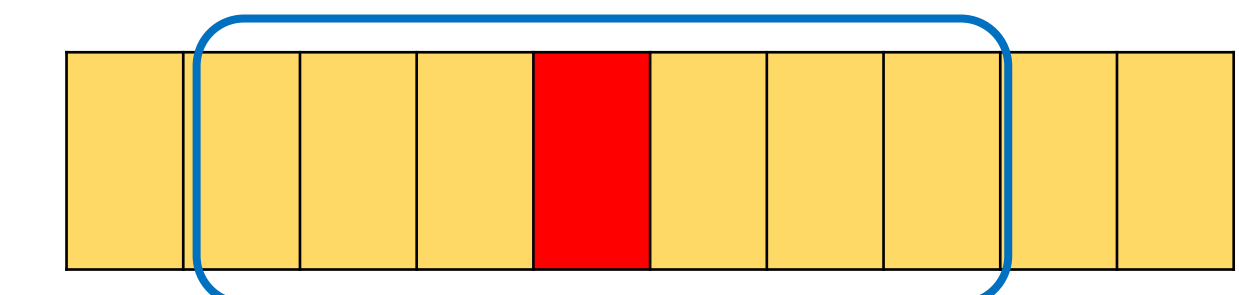
# Co-PACRR: A Context-Aware Neural IR Model for Ad-hoc Retrieval

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Query: Jaguar SUV price.

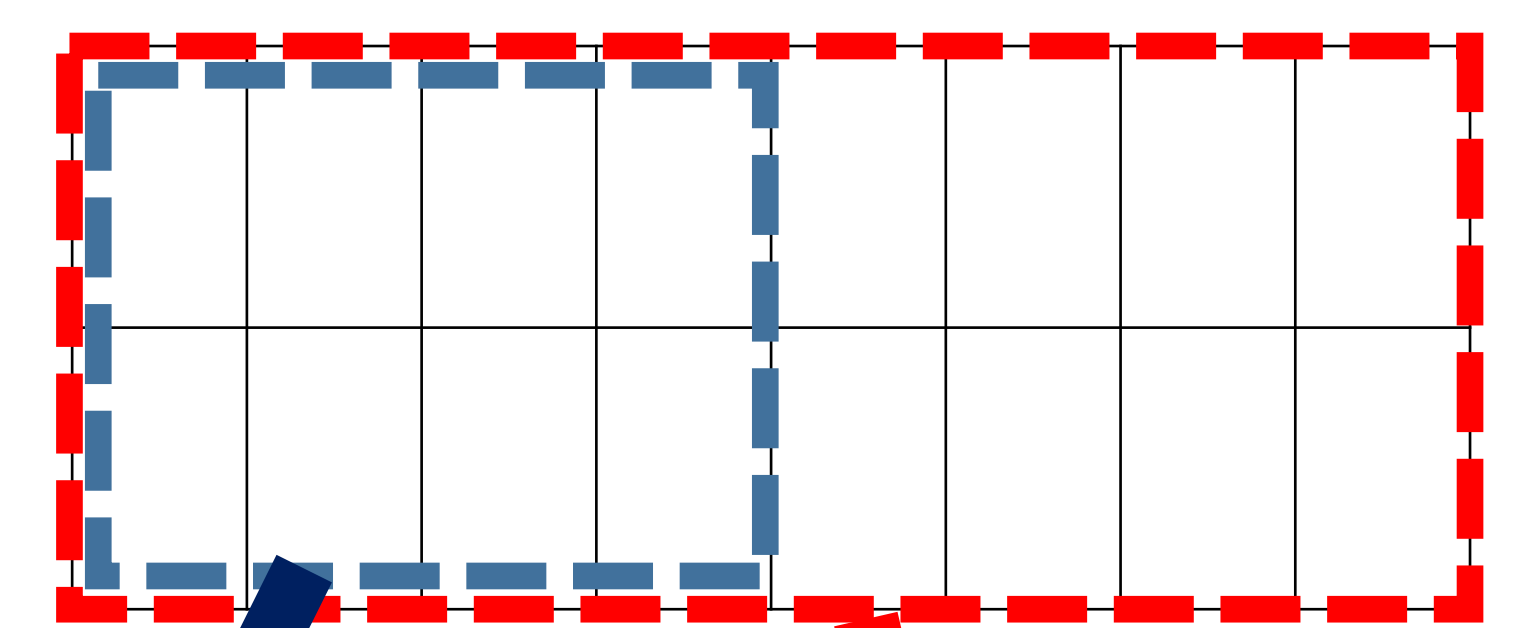
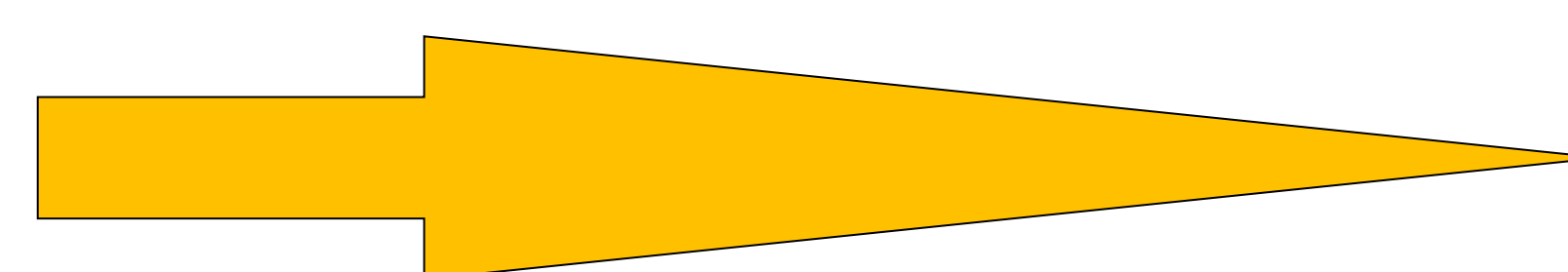
❑ **Ambiguity** in local document context

Document: A Jaguar attacked a car in a safari park.



Examine matchings  
w.r.t. their context

❑ **Location** in global document context



first half of the document    complete document

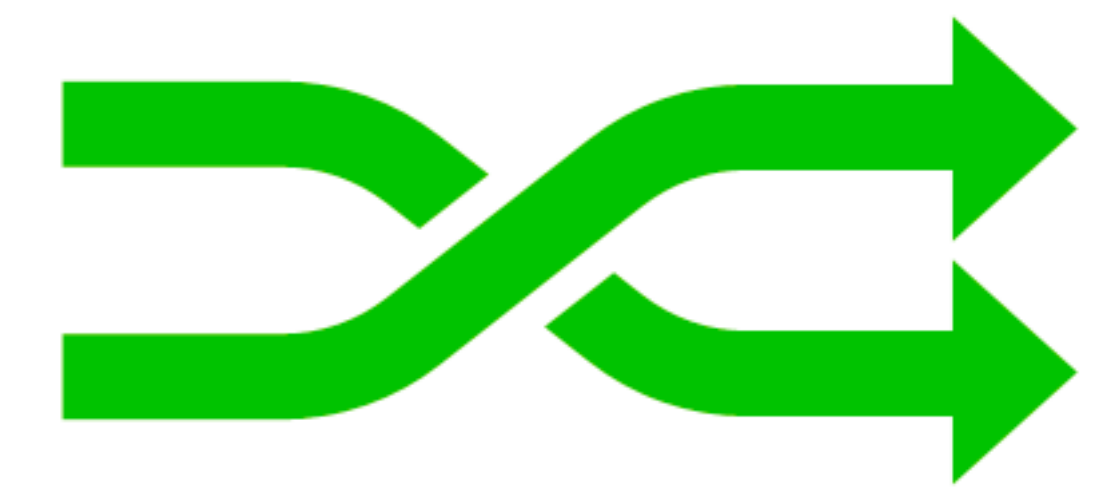
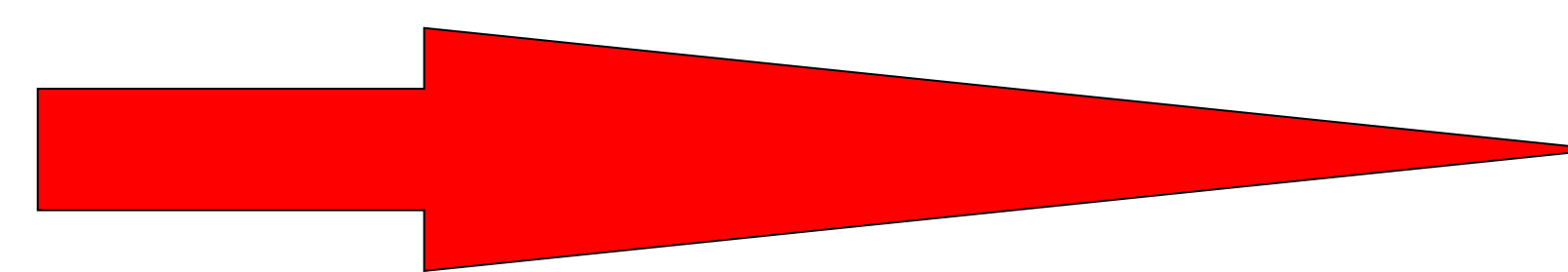
Employ cascade relevance model

❑ **Regularization** for different query contexts



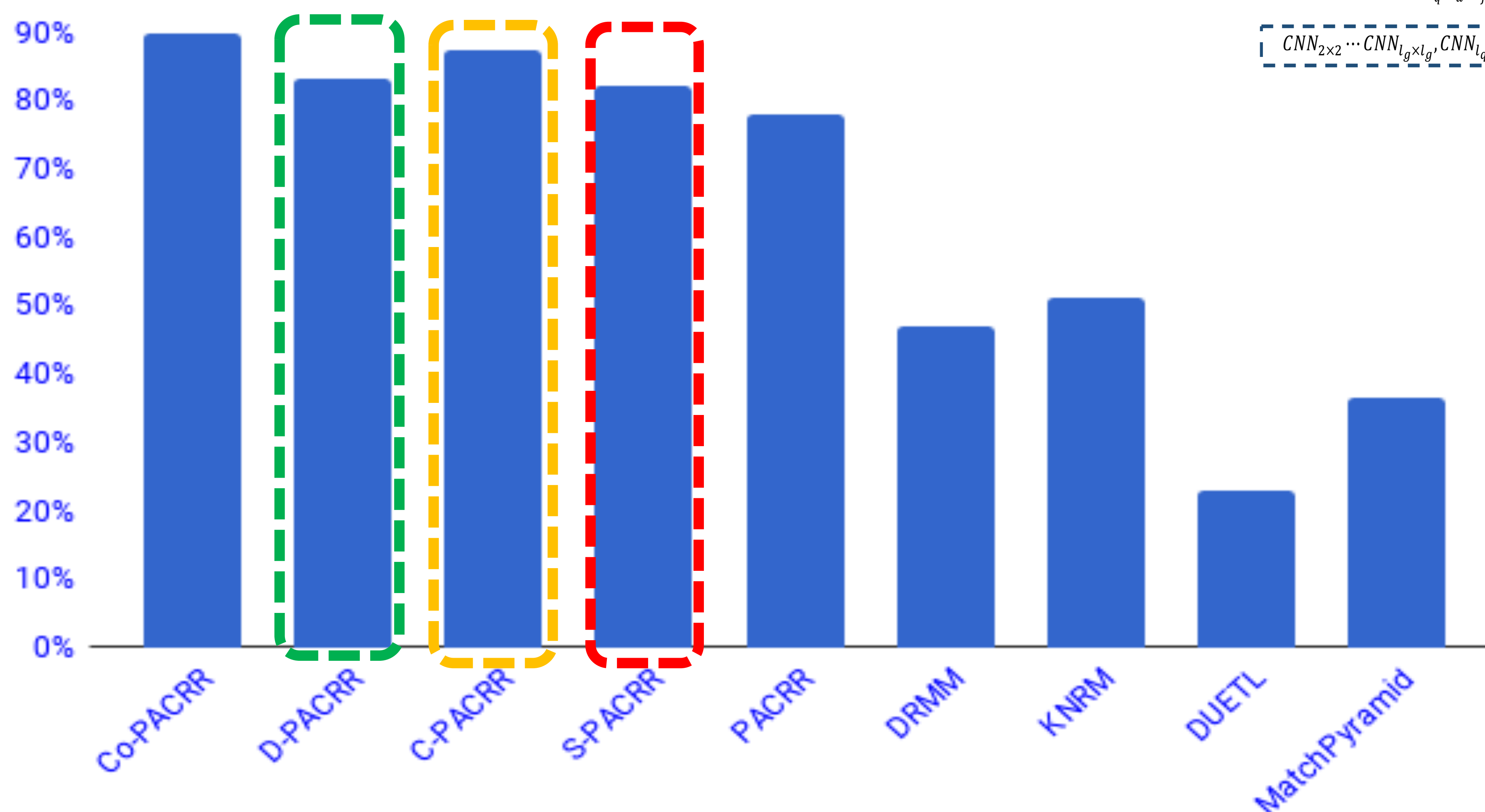
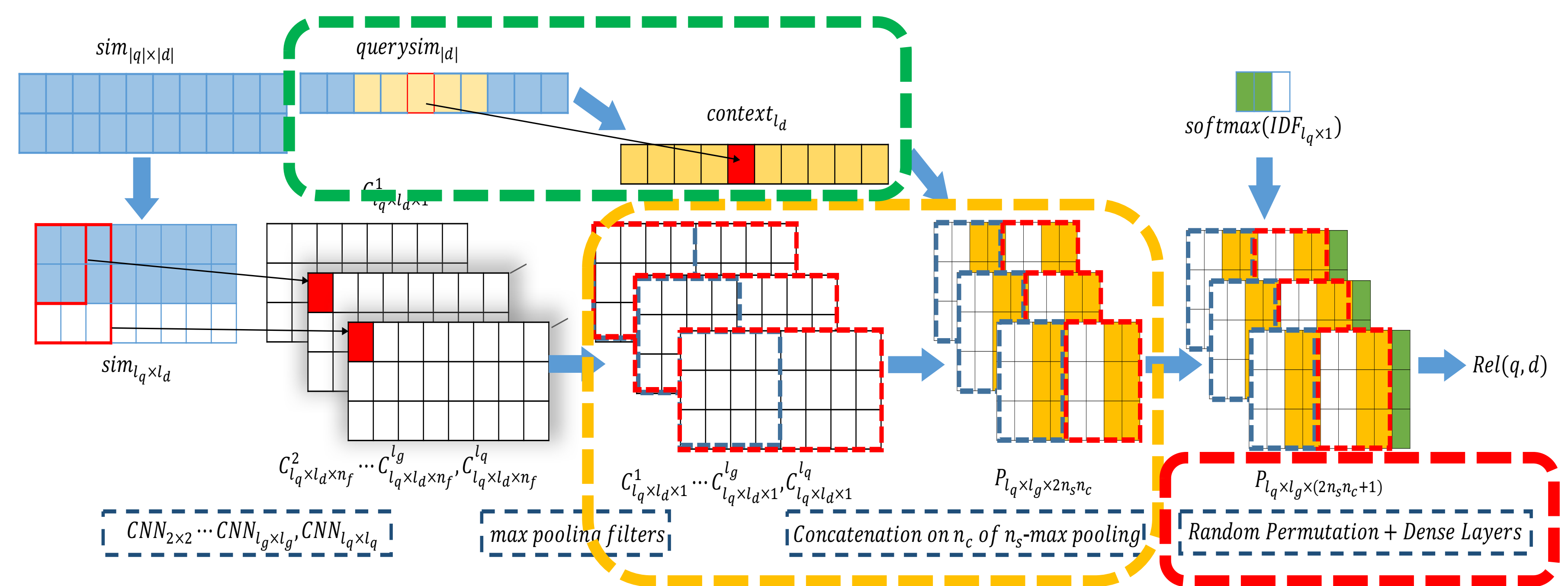
Combination

Relevance Score



Shuffle weights on query  
terms before combination

- ❖ Examine the local context
- ❖ Cascade relevance model
- ❖ Permute before combining



- Re-rank search results from query likelihood on TREC Web Track 2009-2014 (average on 300 queries)
- y-axis: improvement relative to QL