CounQER: A System for Discovering and Linking Count Information in Knowledge Bases
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**Problem Statement**

Identify predicates in KBs storing count information - through integers, counting predicates, and entity enumerations, enumerating predicates.

Semantically align such set predicates.

Understanding count information has benefits in:
- **KB curation.** Discover incompleteness and/or inconsistencies through alignments.
- **QA enhancements.** Enable query result enrichment and debugging. Highlight variations in predicate usage for the same concept.

**Method**

Supervised Classification for identifying:
- Counting predicates: numberOfChildren, staffSize
- Enumerating predicates: child, employer\(^1\), workInstitution\(^1\)

Statistical and lexical metrics for ranking:
- Alignments:
  - numberOfChildren ↔ child
  - staffSize ↔ employer\(^1\)
  - staffSize ↔ workInstitution\(^1\)

\(^1\)Inverse predicates


**System Description**

**SPO Query.** Interface to query on KB-specific set predicates and entities with real-time entity suggestions.
- Send user selected input parameters (KB, entity, predicate) to our server.
- Shortlist top-5 highest scoring pairs (if available).
- Fire SPARQL queries to the corresponding KB endpoint.

**KB Alignments.** Interface to view all discovered alignments across Wikidata, Freebase and two DBpedia versions (raw and mapped).

Alignments can be sorted by their scores and are searchable by their labels.

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**System Highlights**

- **Entity-specific set predicate suggestions**, ordered based on whether they are populated and have alignments.
  - Empty main results are supplemented through highest-ranked and instantiated alignments.
  - Links to SPARQL queries can be followed to check out the actual query made by CounQER to the endpoints.
  - **Set predicate statistics** show the average integer value or the average number of entities the set predicate takes.

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