

Cost Aggregate Queries on Knowledge Graph Augmented by Reference Data Libraries



THE UNIVERSITY OF
WESTERN
AUSTRALIA

Ziyu Zhao

PhD Student

Theme 1

2022-07-01

Virtual - Researchers Catch-up

We all know how important it is to understand our financial status, especially when trying to understand the breakdown of our costs. In large complex organisations, it is not practical for managers to examine costs for all individual assets in the maintenance domain. Instead, costs are usually aggregated into "buckets" using SQL query statements such as "group by" and "sum" on strings in work order spreadsheets. Once set up, these aggregation methods are not easy to change and are reliant on the vagaries of the available string matching algorithms. However, such constraints can be relieved using Knowledge Graphs (KGs) because aggregation can be queried at the entity class level over KGs.

We have also improved the functionality of these queries by adding knowledge of reference data libraries to the KG. In this presentation, Ziyu demonstrated how to get aggregation costs using knowledge graphs enriched by the data from reference libraries.