A Supplemental Material

A.1 Relation Hierarchy Flowchart

Figure 1 shows flowchart for relation hierarchy creation. This flow chart depicts detailed description of each step.

A.2 Relation Hierarchy

In this subsection we provide 12 sub-hierarchies. Each sub hierarchy corresponds to one entity type (person, organization and location) from one of the hierarchy (\mathcal{H}_i , \mathcal{H}_d , \mathcal{H}_w , and the common hierarchy \mathcal{H})

A.3 Relation List

We have also shared list of all the 623 canonical relations in a csv file. Every relation is mapped with an unambiguous relation-id. Each relation is represented by the branch of the tree. For example, rel.org.org-per.founder, R10200336.

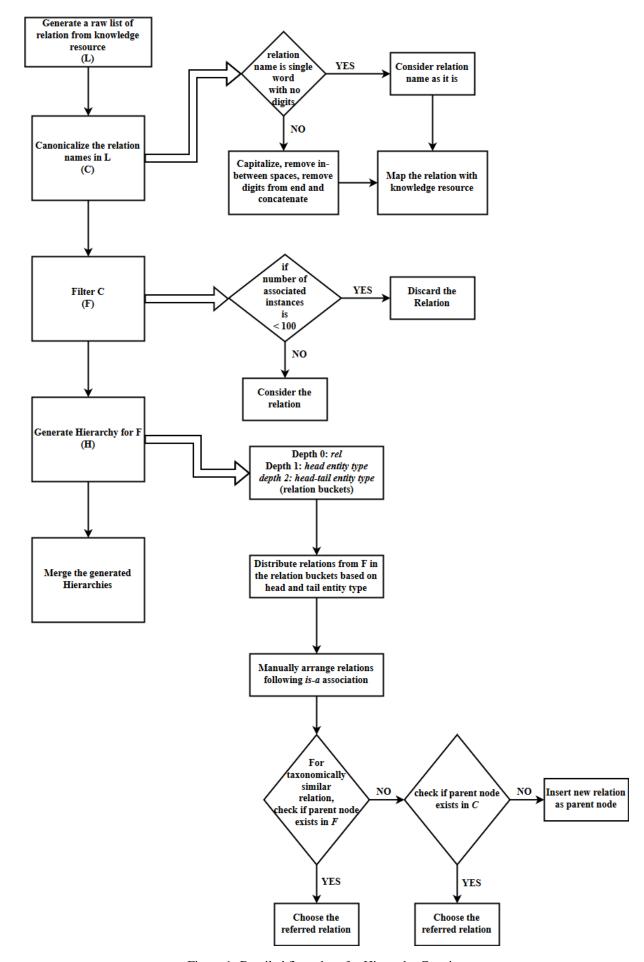


Figure 1: Detailed flow chart for Hierarchy Creation

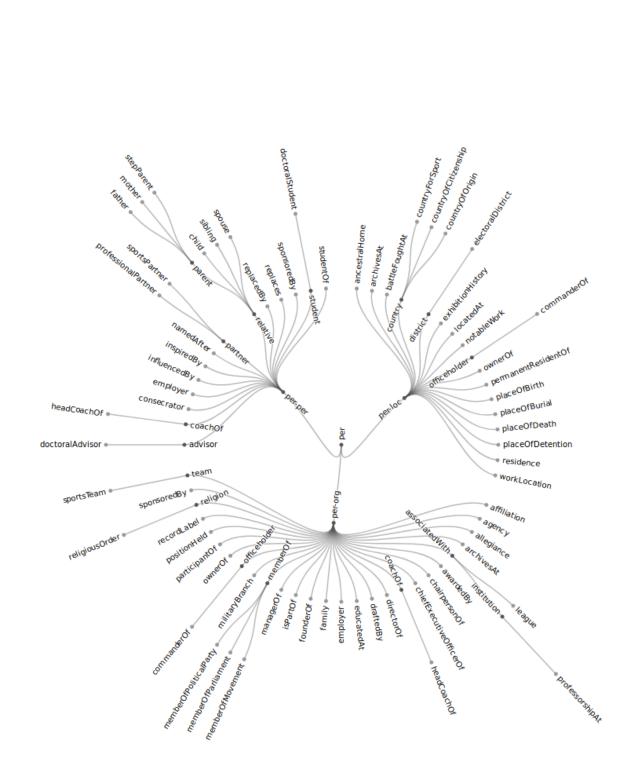


Figure 2: Wikidata Person Hierarchy

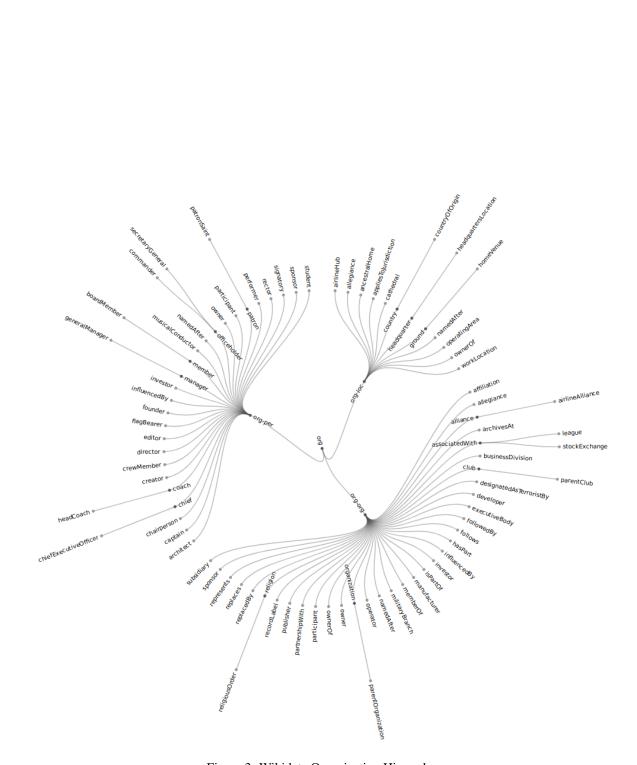


Figure 3: Wikidata Organization Hierarchy

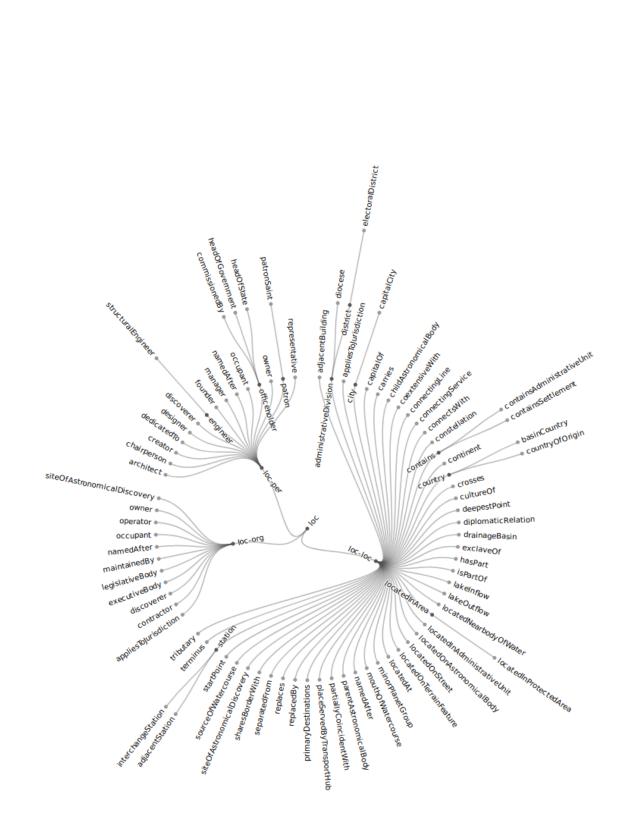


Figure 4: Wikidata Location Hierarchy

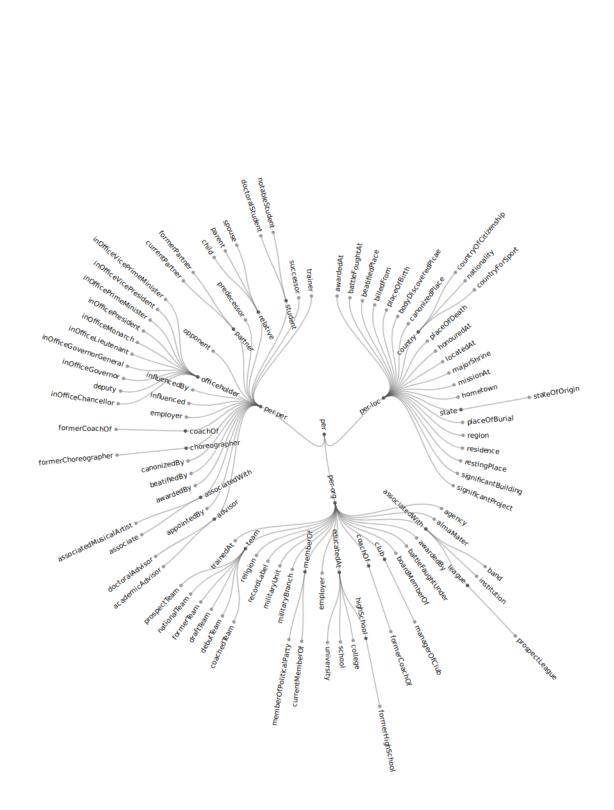


Figure 5: DBpedia Person Hierarchy

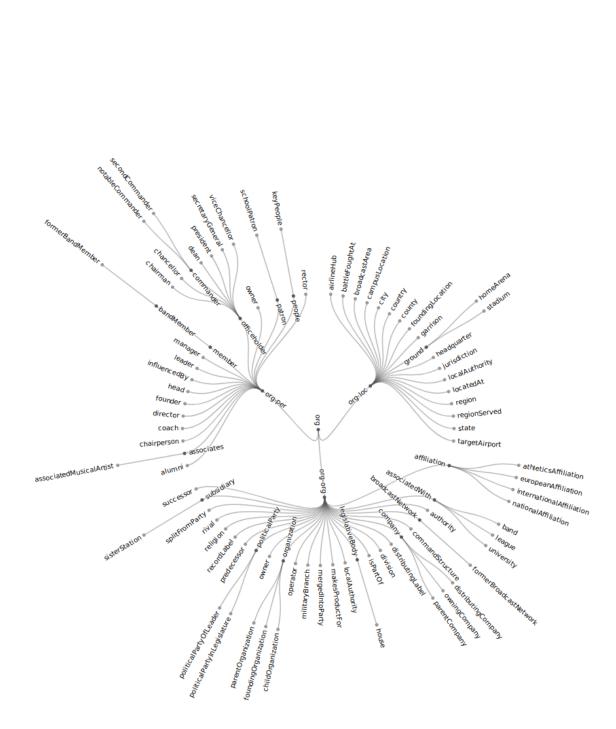


Figure 6: DBpedia Organization Hierarchy

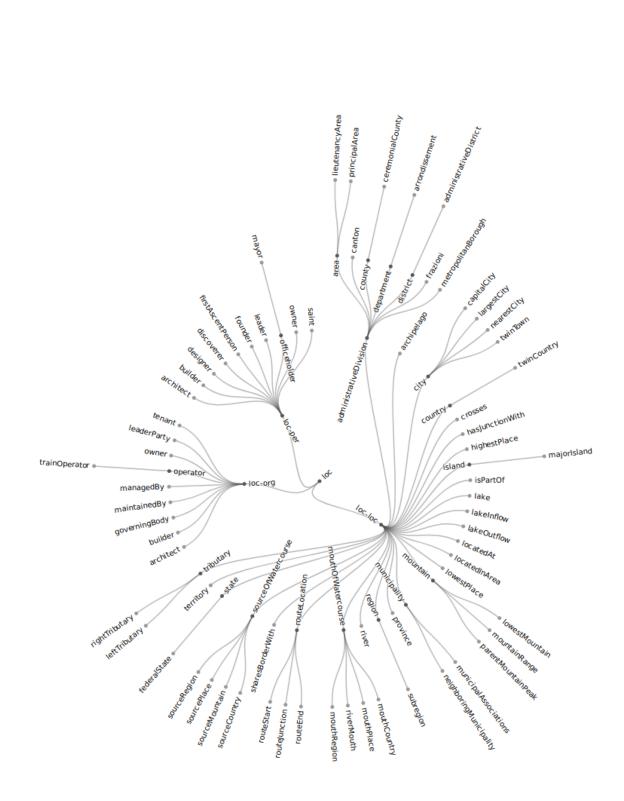


Figure 7: DBpedia Location Hierarchy

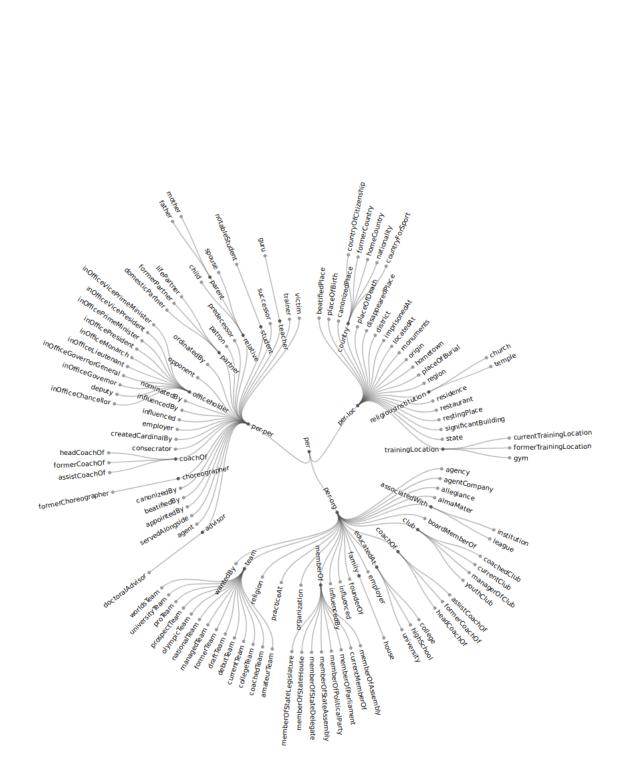


Figure 8: Wikipedia Infobox Person Hierarchy

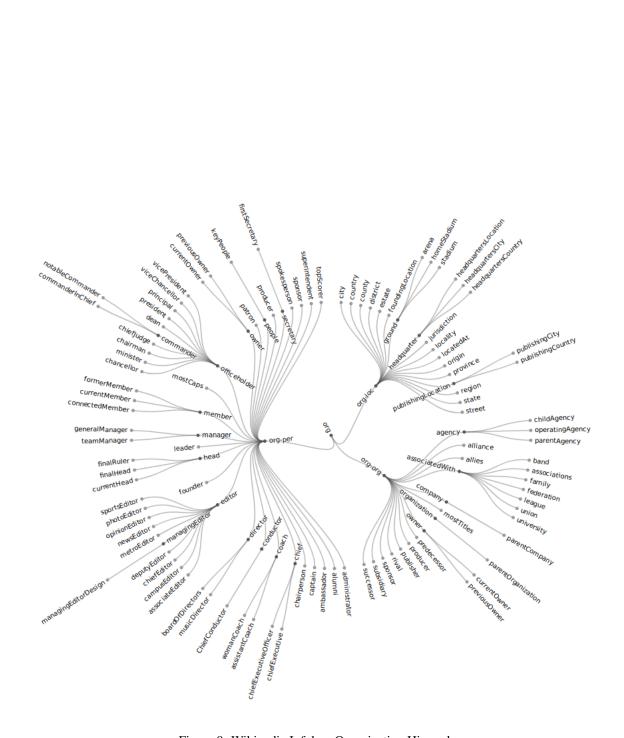


Figure 9: Wikipedia Infobox Organization Hierarchy

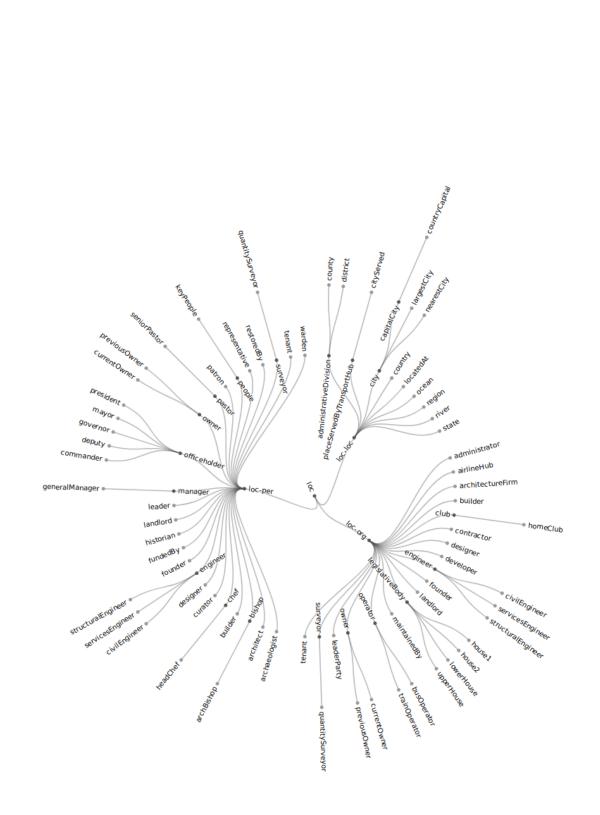


Figure 10: Wikipedia Infobox Location Hierarchy

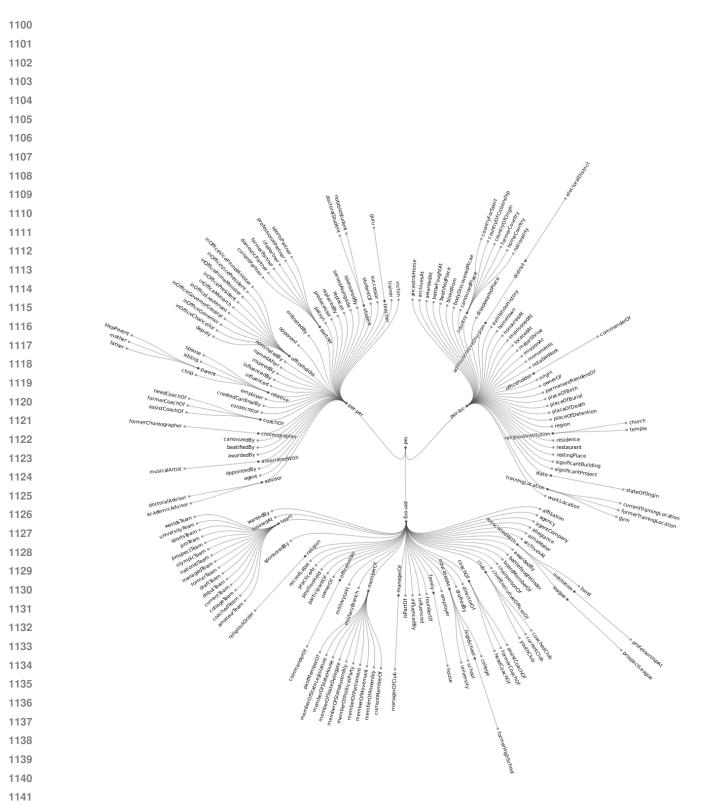


Figure 11: Common Person Hierarchy

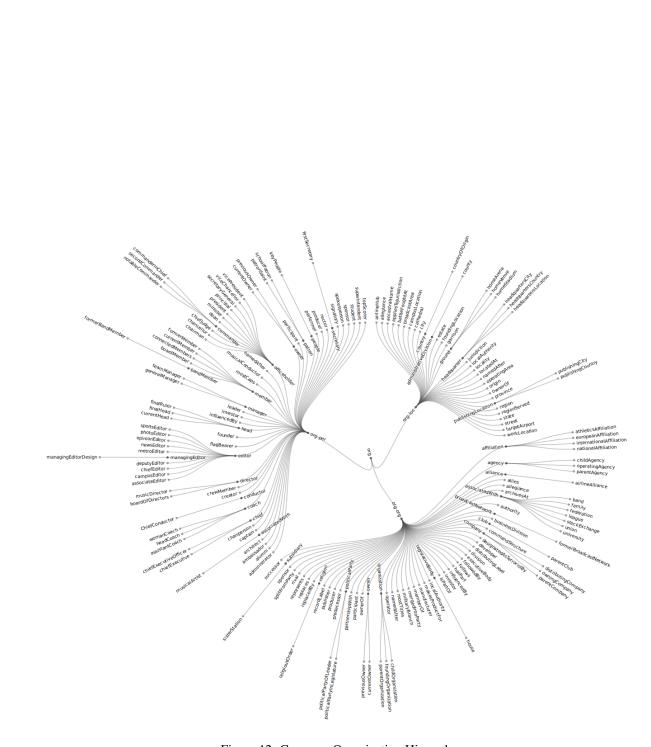


Figure 12: Common Organization Hierarchy

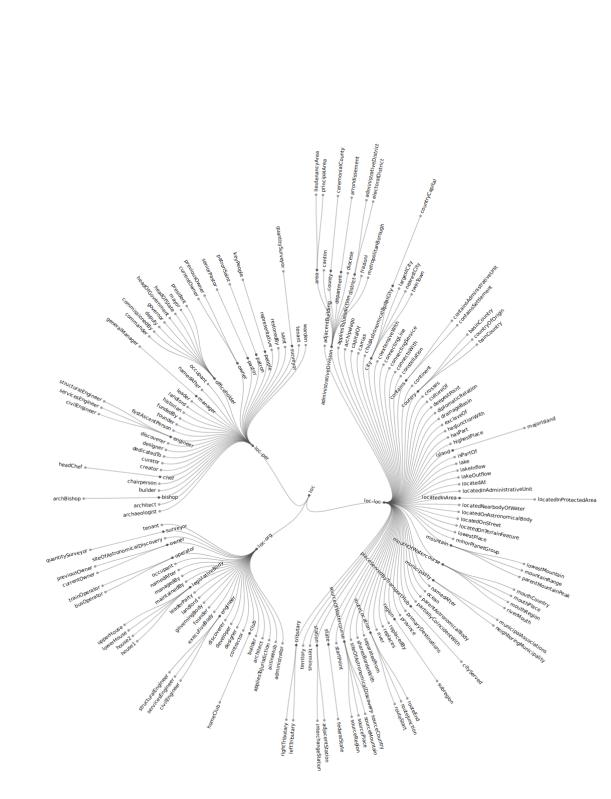


Figure 13: Common Location Hierarchy