Ouery Q: A 56 year old male patient Atrial Fibrillation with atrial fibrillation presents to the clinic. Given their history of heart Heart Failure Diabetes Mellitus failure, diabetes and PAD, what is their risk of stroke? Should they be placed on anticoagulation?  $E_{O'}$ Step 2: Relation Retrieval and Triplet Ranking Triplet Ranking Similarity One-hop Answer Expansion UMLS Relations R Database MMR Step 3: Re-Ranking Cross-Encoder Top-k Triplets Top-p Triplets  $T_{\text{top-p}}$  $T_{\text{top-k}}$ Step 4: Obtaining LLM Response Query Q +  $T_{\text{top-p}}$  LLMs Answers

Step 1: Entity Extraction and Mapping