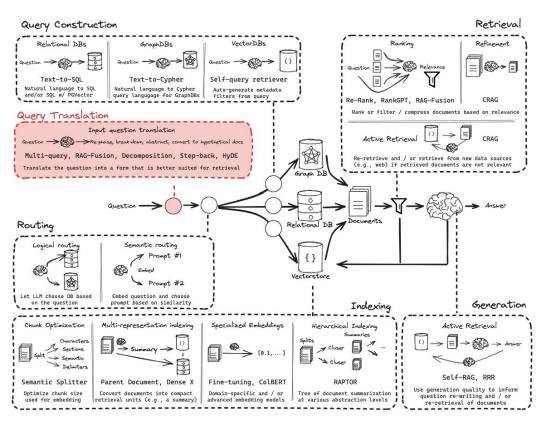


# RAG from scratch: Query Translation (Multi-Query)

Lance Martin
Software Engineer, LangChain
<a href="mailto:orange-nature">oRLanceMartin</a>



### **Query Translation**





#### **Problem statement**



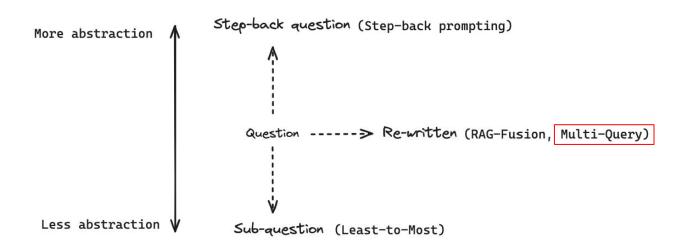
Semantic search on embeddings is hard to get right. Embedding long documents is a challenge. User queries are a challenge, if a user provides an ambiguous query they'll get ambiguous matches

LLMs just follow what was in the context and hallucinate answers as a result

11:06 AM · Apr 28, 2023 · **113.7K** Views

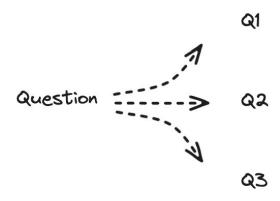


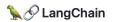
#### General approaches to transform questions



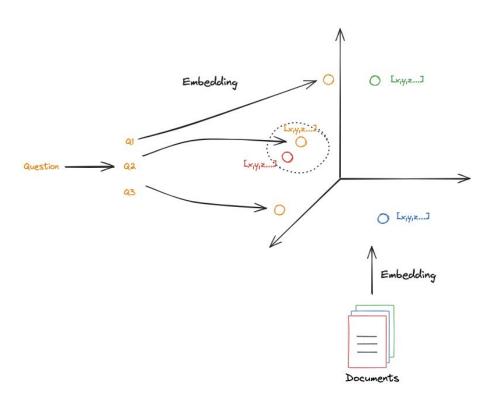


# Transform a question into multiple perspectives



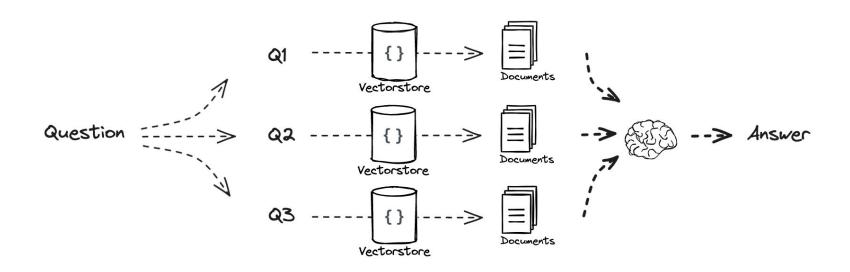


# Intuition: Improve search





### Use this with parallelized retrieval





Code walk-through