

Query Enhancement

1) Query Expansion Technique

📖 Query Enhancement – Query Expansion Techniques

In a RAG pipeline, **the quality of the query sent to the retriever determines how good the retrieved context is** — and therefore, how accurate the LLM's final answer will be.

That's where **Query Expansion / Enhancement** comes in.

🎯 What is Query Enhancement?

Query enhancement refers to techniques used to improve or reformulate the user query to retrieve better, more relevant documents from the knowledge base.

It is especially useful when:

↳ *Vector Store*

1. The original query is short, ambiguous, or under-specified
2. You want to broaden the scope to catch synonyms, related phrases, or spelling variants

✅ Why Query Expansion Matters in RAG

Problem (Original Query)	Solution (Enhanced Query)
"LangChain memory"	"LangChain memory modules, conversation memory"
"tools in LLM"	"LangChain tools, APIs, calculator, agent tools"
"retrieval"	"vector retrieval, dense search, BM25, MMR"
Better queries → Better retrieved chunks → Better grounded LLM answers ✅	

Query Expansion Work

