

# Advanced RAG – Goals

- Implement HyDE to improve retrieval recall.
- Add a Query Analyzer rewrite step when recall is weak.
- Discuss re-ranking and routing patterns; hands-on HyDE demo.

# HyDE Pattern

- LLM drafts a hypothetical answer to the question.
- Embed the hypothetical doc → retrieve similar chunks.
- Often boosts recall where user query lacks vocabulary match.

## Query Rewrite / Corrective Step

- If distances are high (low similarity), rewrite the query with synonyms and field names.
- Optionally routes to different collections or metadata filters.

# Demo Architecture

- Same Chroma store as Session 1; reuse ingestion.
- HyDE query path and answer constrained to context.
- Citations and distances printed for trust.