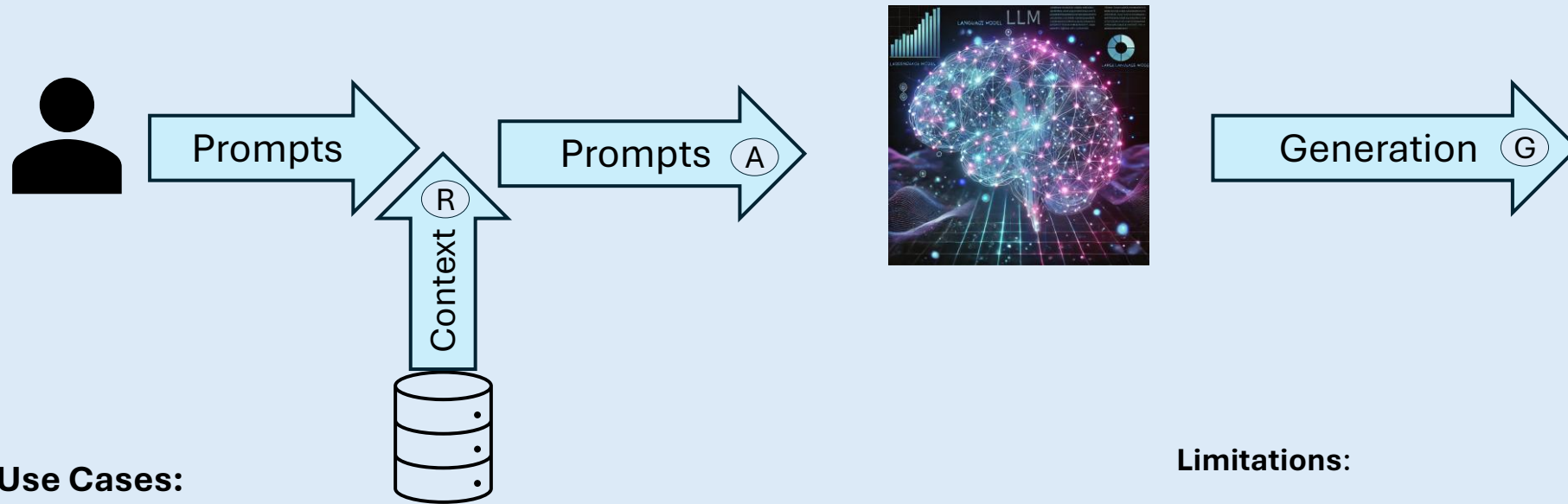


GenAI Projects:

RAG (Retrieval Augmentation Generation)

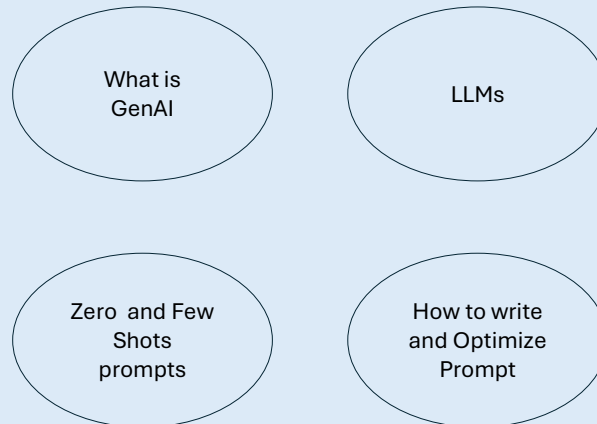
RAG



Use Cases:

1. Enterprise Knowledge Management
2. Customer Support Automation
3. Legal & Compliance Research
4. Financial & Investment Advisory
5. Scientific Research & Drug Discovery
6. Personalized Education & Tutoring
7. Media & Content Generation
8. Code Assistance & Debugging
9. E-commerce Product Recommendations
10. Healthcare & Medical Assistance

Prerequisites:



Limitations:

1. Retrieval Quality Issues
2. Ranking Limitations
3. Latency & Computational Overhead
4. Knowledge Cutoff & Staleness
5. Hallucination & Misinformation
6. Data Security & Privacy Risks
7. Scalability Challenges
8. Domain-Specific Adaptation
9. Integration Complexity
10. Dependency on External Sources

Hands on:

1. [Using any free LLMs](#)
2. Using Python code

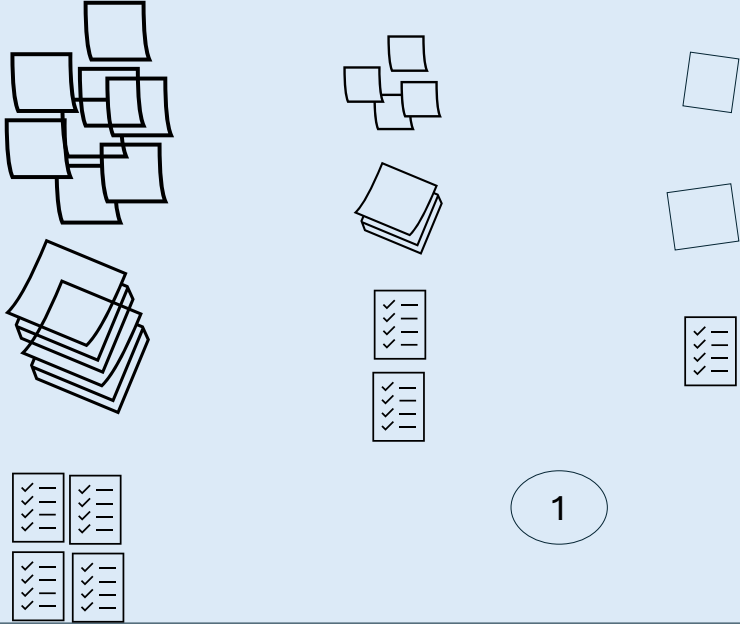
RAG: Advance feature specific to 'R'

Maximal Marginal Relevance (MMR)

Vector data base

Similarity search

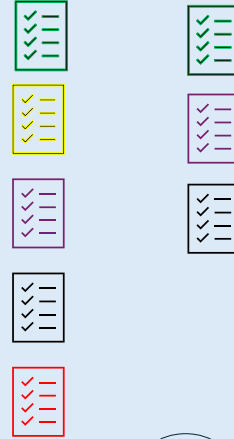
MMR



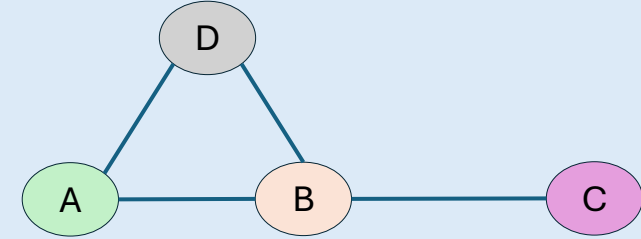
Reranking

Similarity search

Rank



Graph RAG



3

Similar Questions

Asking LLM to generate more similar questions

4

Similar Responses

Asking LLM to generate generic answer then get similar response from VDB

5