

# Generative AI Interview Questions

1. What is GenAI (Generative AI)?
2. Describe your experience working with text generation using generative models.
3. What types of generative models have you worked with, and in what contexts?
4. Discuss how multimodal AI combines different types of data to improve model performance, enhance user experience, and provide richer context for decision-making in applications like search engines and virtual assistants.
5. What is Retrieval-Augmented Generation (RAG)?
6. Can you explain the text generation difference between RAG and direct language models(LLM)?
7. What are some common applications of RAG in AI?
8. How does RAG improve the accuracy of responses in AI models?
9. What types of data sources are typically used in RAG systems?
10. What is Retrieval-Augmented Generation (RAG), and how does it differ from traditional generation models? Hint: Discuss the core idea of RAG models, which combine generative and retrieval mechanisms to enhance output quality and accuracy, and contrast it with standard generative models that rely solely on pre-trained knowledge.
11. What is Fine-tuning?
12. Describe the Fine-tuning process.
13. What are the different Fine-tuning methods?
14. When should you go for fine-tuning?
15. What is the difference between Fine-tuning and Transfer Learning?
16. What are vector databases, and how do they differ from traditional relational databases? Hint: Discuss the fundamental differences in data storage, retrieval methods, and the use cases that vector databases are designed to address, particularly in handling unstructured data and similarity search.
17. Explain how vector embeddings are generated and their role in vector databases.

18. Can you describe a scenario where you would prefer using a vector database over a traditional database?
19. What are some popular vector databases available today, and what unique features do they offer?
20. How would you build an LLM-based question-answering system for a specific domain or complex dataset?
21. WHAT ARE SOME COMMON APPLICATIONS OF GENERATIVE AI IN REAL-WORLD SCENARIOS?
22. WHAT CHALLENGES ARISE WHEN TRAINING AND EVALUATING GENERATIVE MODELS?
23. HOW DOES GENERATIVE AI SUPPORT AND ENHANCE HUMAN CREATIVITY?
24. HOW CAN PROMPTS BE OPTIMIZED TO YIELD BETTER RESULTS FROM LLMS?
25. Why is multimodal learning important in modern AI applications?
26. Give examples of real-world applications that use multimodal GenAI.
27. What is fine-tuning in LLMs, and why is it done?
28. What were the key challenges you faced while building a generative AI project?
29. What was the most difficult part of integrating a vector database (e.g., FAISS, Chroma, Pinecone) into your RAG pipeline?
30. What do you do when your LLM gives inconsistent answers for the same question?