# Key Terms in LLMs (Large Language Models) and Interview Q&A;

**Tokenizer**: Splits text into smaller parts called 'tokens'. Example: 'Hello world' becomes ['Hello', 'world'].

*Interview Question: What is a tokenizer in an LLM?*
Answer: A tokenizer breaks down text into smaller parts so the model can understand and process it.

**Encoding**: Turns tokens into numbers so the computer can process them.

*Interview Question: Why do we need encoding in LLMs?*
Answer: Encoding allows text to be represented as numbers so the model can compute and learn from it.

**Probability machine**: LLMs guess the next word based on the words before it.

*Interview Question: How does an LLM generate text?*
Answer: It predicts the next word based on previous words, like a smart autocomplete.

**Fine-tuning**: Training a model further on specific data to improve it for a special task.

*Interview Question: What is fine-tuning in LLMs?*
Answer: It means adapting a pretrained model to do better on a specific task using more targeted data.

**Prompt engineering**: Carefully designing input text to get better answers from the model.

*Interview Question: Why is prompt engineering important?*
Answer: A good prompt helps the model give more accurate or useful responses.

**Retrieval augmentation**: Using external search to find helpful info and improve model answers.

*Interview Question: What is retrieval-augmented generation (RAG)?*
Answer: It combines search tools with LLMs to give better and more accurate answers.

**Risk mitigation**: Ways to reduce mistakes or harmful outputs from LLMs.

*Interview Question: How can we reduce the risks of using LLMs?*
Answer: We can use prompt engineering, fine-tuning, and filters to prevent biased or wrong outputs.

**Foundation model**: A big pretrained model that can be used for many tasks.

*Interview Question: What is a foundation model?*
Answer: It's a general-purpose model trained on large data that can be adapted to many tasks.

**Repurposing**: Using a model trained for one thing to do something else.

*Interview Question: What does repurposing a model mean?*
Answer: It means using a foundation model for a new task it wasn't originally trained for.

**Code assistant**: An AI tool that helps write or review code, built using a fine-tuned LLM.

*Interview Question: How do LLMs help in coding tasks?*
Answer: They can be trained to understand code and help developers write or fix code faster.