Introduction to Artificial Intelligence

Artificial Intelligence refers to machines that can perform tasks requiring human intelligence.

Examples include natural language processing, computer vision, and decision-making systems.

Machine Learning Basics

Machine learning enables systems to learn patterns from data.

Supervised, unsupervised, and reinforcement learning are common paradigms.

Model evaluation is performed using metrics like accuracy, precision, and recall.

Embeddings and Vector Search

Embeddings are numerical representations of text or data.

They allow semantic similarity comparisons using vector distance.

Vector databases like FAISS or Chroma are commonly used.

Retrieval Augmented Generation (RAG)

RAG combines information retrieval with language models.

Relevant documents are retrieved and passed to the model as context.

This improves factual accuracy and reduces hallucinations.