

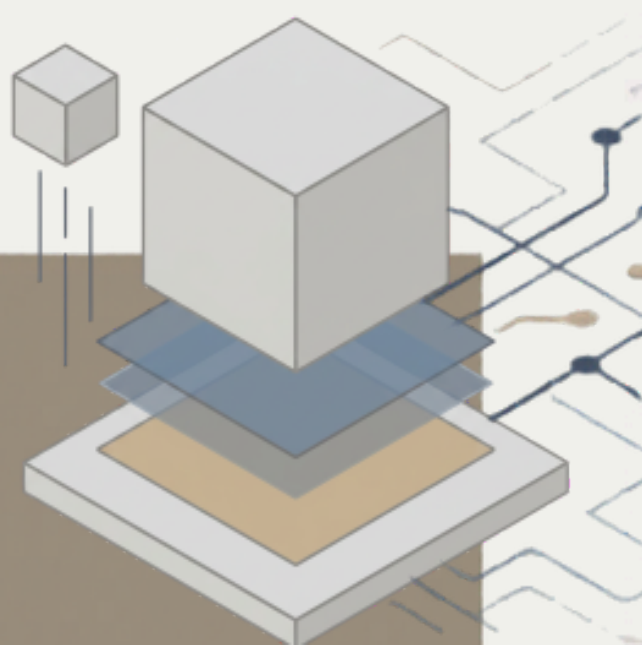
What Is Generative AI?

How Does It Work?

A Guide for Librarians

WHAT IS GENERATIVE AI?

GenAI is software that produces content by identifying patterns in training data and predicting likely outputs. It generates text, images, code, and audio based on prompts, functioning like an autocomplete system that was trained on vast datasets, allowing it to predict and generate plausible-sounding-and-looking content.



HOW DOES IT WORK?

DATA INGESTION & TRAINING



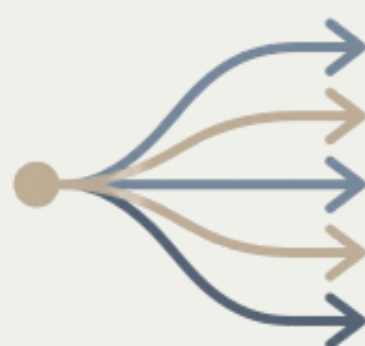
Training involves processing massive amounts of content: images, text, audio, code. These are usually gathered without permission from artists and writers who created them. The system identifies statistical patterns within each type of information: visual compositions and color relationships in images, word combinations and linguistic structures in text, recurring elements in other formats. It builds models based on these patterns to generate new content that resembles the training data.

PATTERN RECOGNITION & MODELING



By analyzing millions of examples, the system learns to recognize patterns—which words typically appear together in text, which visual elements commonly combine in images, how different features relate to each other. It uses these statistical patterns to generate new content that resembles its training data. This is similar to text autocomplete, but extended to creating entire documents, images, or other outputs. This is pattern-based prediction, not human-like understanding or creativity.

OUTPUT PRODUCTION & PREDICTIVE SEQUENCING



To create content, the system receives a prompt and then predicts what should come next: the next word in text, the next portion of an image, the next note in audio. Predictions are based on patterns from training data. Output is created one element at a time. The result comes from statistical predictions about what is most likely to come next, not from understanding meaning or verifying accuracy.