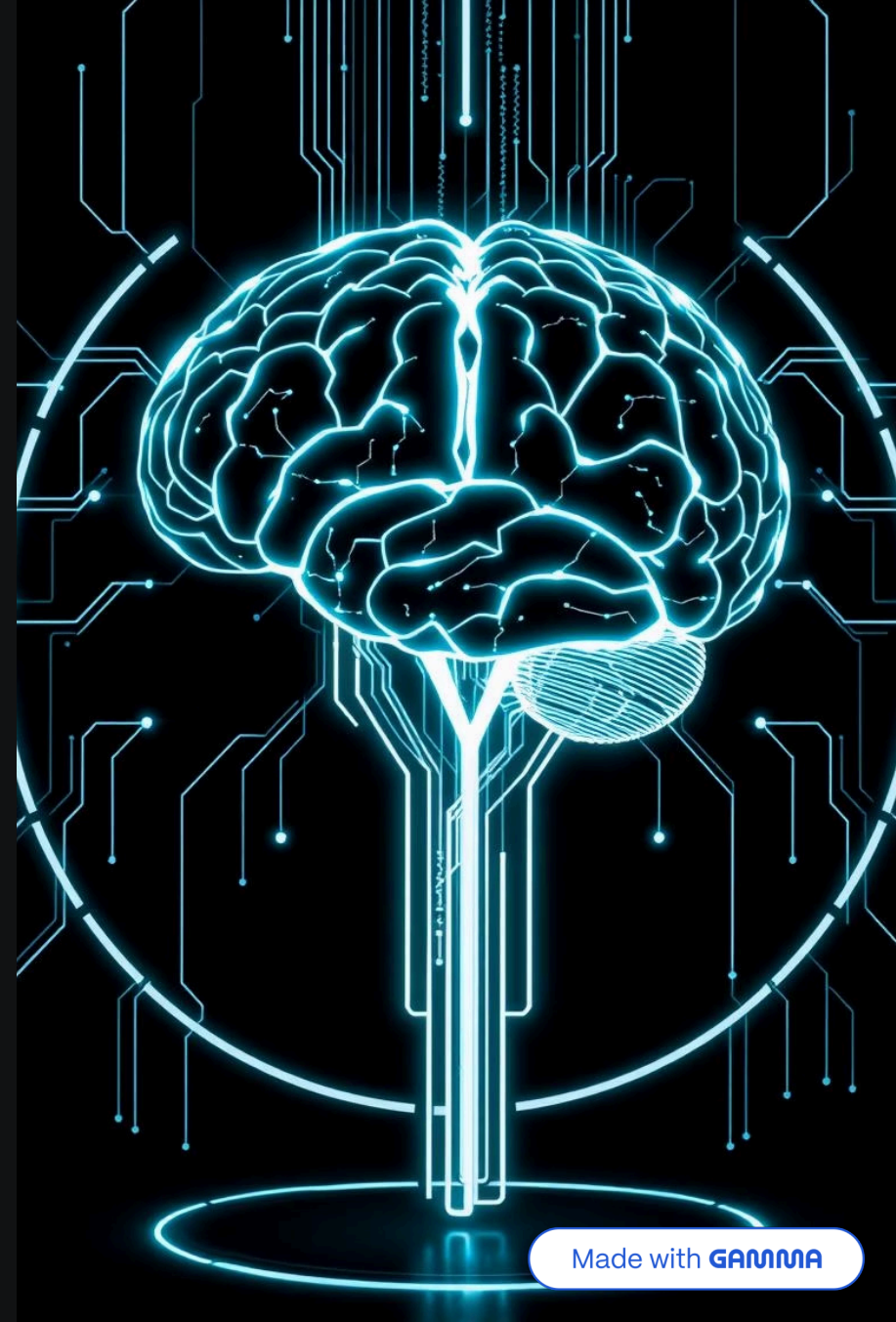# Understanding Generative AI, LLMs, and Agentic AI

This presentation explains Generative AI, Large Language Models, and Agentic AI basics.

by Erum Waris

What is Generative AI?

Definition

AI systems designed to create new original content.

Content Types

Text, images, music, audio, and code.

How it Works

Learns patterns from large datasets to generate novel outputs.

Examples

ChatGPT for text, DALL·E for images.

What are Large Language Models (LLMs)?

Definition

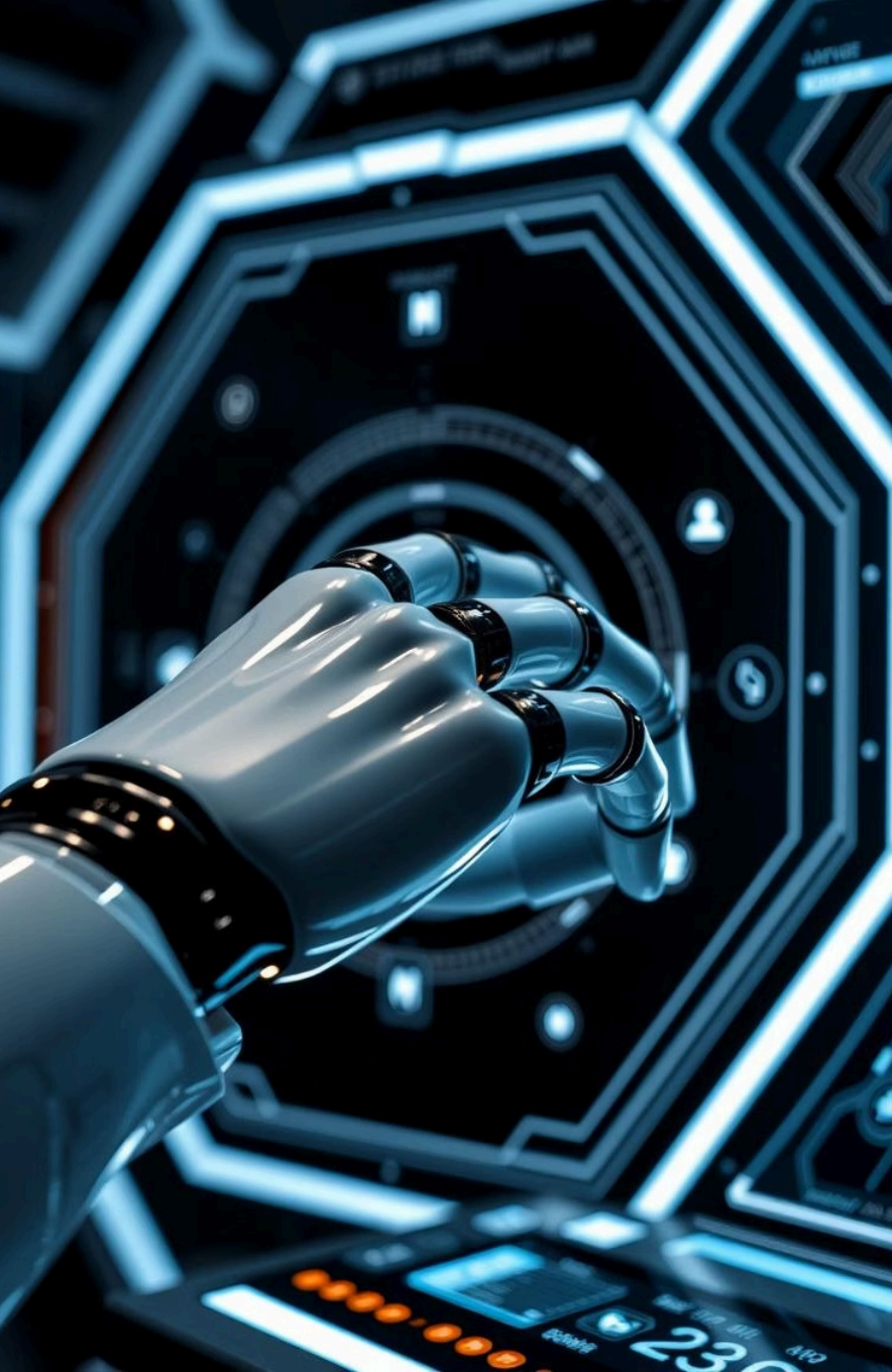Generative AI specialized in understanding and producing human language.

Built on transformer deep learning architecture.

Training

- Massive datasets from books, websites, and articles.
- Uses self-attention to grasp context and word relationships.

Examples

- GPT-3
- GPT-4

What is Agentic AI?

Definition

AI systems capable of autonomous decision making and actions.

Capabilities

Plans, selects alternatives, executes multi-step tasks.

Interaction

Operates in environments, interacts with systems or users.

Applications

Robotics, autonomous agents, AI assistants.

Difference Between Generative AI and Agentic AI

Aspect	Generative AI	Agentic AI
Function	Creates new content like text, images, code	Autonomous task execution with decision-making
Focus	Content generation	Goal-directed actions and autonomy
Examples	ChatGPT, DALL·E	Autonomous robots, AI assistants
Complexity	Generates based on input data	Plans and interacts dynamically
Use Cases	Writing, image creation, chatting	Task automation, decision making

Summary and Key Takeaways

1

Generative AI

Creates diverse content using learned data patterns.

2

Large Language Models

Specialize in natural language generation using transformers.

3

Agentic AI

Autonomously makes decisions and executes tasks.

4

Relationships

LLMs are generative AI; agentic AI adds autonomy and goals.