

Introduction to Generative AI

Description

The answer to the question “Can a machine create unique content indistinguishable from human-made works?” lies in generative artificial intelligence. Generative AI stands out as an Artificial Intelligence technology that allows for the quick, easy, and efficient design of content (such as text, images, etc.). Through this training, participants will gain knowledge about the role of generative AI in the field of artificial intelligence, its areas of application, and the tools that can be used to create content (such as ChatGPT, Gemini, Claude, Bing, etc.).

They will also learn about **prompt engineering**, which involves crafting inputs, instructions, and commands to elicit the best responses and behaviors from AI models. Participants will develop awareness of the key tips to consider when creating effective prompts, and they will gain practical experience with prompt examples in areas such as text summarization, translation, image generation, code generation, reasoning, and data analysis. Additionally, they will learn how to integrate AI models like ChatGPT with APIs in the Google Colab environment.

Audience

People who are interested in artificial intelligence technologies (marketing, content producers, creative sector employees)

Outline

What is Artificial Intelligence?

Machine Learning and Deep Learning Methods

Natural Language Processing and Large Language Models

What Are the Application Areas of Artificial Intelligence? Real-Life Examples

What Are the Future Trends and Approaches of Artificial Intelligence?

What is Generative AI? What is its Role in AI?

In Which Sectors Should Generative AI Be Used?

Generative AI Technology

Fundamentals of Generative AI

Types of Generative AI Models

- Generative Adversarial Networks (GANs)
- Diffusion Models
- Variational Autoencoders (VAEs)

Optimizing Model Parameters (ChatGPT playground)

Potential Risks and Challenges to Address

Current Application Examples Based on Generative AI

- Chatbots (ChatGPT, Gemini, etc.)
- Text-to-Image Applications (DALL-E, Bing)
- AI-Powered Digital Assistant (Microsoft Copilot)

Prompt Engineering

- What is prompt engineering? Why has it become popular?
- What are the components of a prompt?
- What to consider when creating an effective prompt?
- Prompt examples for popular tasks:
 - Text summarization and classification
 - Question answering
 - Image generation
 - Translation
 - Code generation

- Data analysis
- Defense Strategies Against Risks and Misuse

Tools and Applications in Prompt Engineering
API Integration with AI Models in Google Colab Environment