intel digital readiness

AI for Youth

Introduction to Generative AI

Facilitator Guide

Total Session Duration: 240 MINUTES

Facilitator Guide

Lesson Title: Introduction to Generative AI
Approach: Instructor-led Interactive Session
Summary: This 4-hour lesson introduces students to Generative AI. The lesson covers four main topics, including an introduction to Generative AI, how it works, how to use it, and the ethical considerations that come with its use. By the end of the lesson, students will have a basic understanding of Generative AI, how it can be used, and the potential ethical implications to consider.
Learning Outcomes: 1. Students will be able to define Generative AI & classify different kinds. 2. Students will be able to analyze how Generative AI works and recognize how it learns. 3. Students will be able to apply Generative AI tools to create content. 4. Students will understand the ethical considerations of using Generative AI.
Pre-requisites: 1. Knowledge of AI project cycle.
Key-concepts: 1. Generative AI
Programs/Applications Used: 1. MS PowerPoint 2. MS Word 3. Jupyter Notebook/Anaconda 4. Web browser (any)

1. Program Overview

No	Time	Topic /Activity	Description	Objective
1	1 hour	Introduction to Generative AI	Definition of Generative AI, Types of Generative AI (GANs, VAEs, etc.), Examples of Generative AI (e.g., art, music, text, images, videos), Benefits of using Generative AI, Case study that explores benefits and limitations of Generative AI	• Students will be able to define Generative AI and its types. • Students will be able to identify examples and benefits of using Generative AI.
2	1 hour	How Generative AI Works?	Understanding Generative Adversarial Networks (GANs), Hands-On activity: GAN Paint, Understanding Variational Autoencoders (VAEs), Understanding the concept of "latent space", Understanding how Generative AI learns and creates new data, Hands-on activity: Create a simple Generative AI model using Python	• Students will be able to explain the concept of Generative Adversarial Networks (GANs) and Variational Autoencoders (VAEs) • Students will be able to identify the concept of "latent space" in Generative AI • Students will be able to create basic Generative AI model
3	1 hour	Using Generative AI	Overview of popular Generative AI tools (e.g., RunwayML, GPT-4, StyleGAN, etc.), How to use Generative AI tools in real-world scenarios – coding, data generation, content creation, analysis, etc. Hands-on activity: Chit-Chat with ChatGPT & Bard. Hands-on activity: Students will use a Generative AI tool to carry out real-world tasks	• Students will be able to identify popular Generative AI tools and their applications. • Students will be able to use Generative AI tools
4	1 hour	Generative AI Ethics	The ethical considerations of using Generative AI, The	• Students will be able to identify the

			potential negative impact on society – (impact on jobs),The importance of responsible use of Generative AI, How to avoid potential bias in Generative AI, and finally a sneak peek on Constitutional AI.	ethical considerations of using Generative AI. • Students will be able to explain the potential negative impact of Generative AI on society. • Students will be able to identify ways to avoid potential bias in Generative AI.

2. Session Preparation

Logistics: For a class of 40

Item	Quantity
Laptop	20

3. Content Guide

- Define Generative AI & classify its different kinds.
- Explain how Generative AI works.
- Discuss the application of Generative AI tools to create content.
- Discuss the ethical considerations of using Generative AI.

4. Troubleshooting Tips

Common Hardware Mistakes/Issues

No	Mistakes/Issues	Possible Reasons	Resolution
1	-	-	-

5. Suggested Reading for Facilitators

Material Suggested	Links	Recommended Usage

6. Bibliography

- Generative AI, Explained by Humans. (n.d.). https://lingarogroup.com/blog/generative-ai-explained-by-humans

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