Smt. Chandaben Mohanbhai Patel Institute of Computer Applications (CMPICA)

Advanced Certificate Course
"Applied AI: From **Data Visualization to Generative Models".**

Week wise Schedule:

Week No.	Content	Duration (Hours)
Module 1: Data Visualization and Machine Learning Insights with Power BI		
1.	Introduction to Data Visualization	15
2.	Data Preparation for Visualization and ML - Creating Basic Visualizations in Power BI	
3.	Introduction to Machine Learning Concepts and AutoML - Implementing AutoML with Vertex AI	
4.	Visualizing AutoML Outputs and Insights in Power BI	
5.	Power BI Service and Power BI Mobile App	
6.	Project: Developing a Power BI Dashboard with AutoML Insights	
Module 2: Deep Learning with CNN Model		
7.	Introduction to Deep Learning and Neural Networks	10
8.	Convolutional Neural Networks (CNNs) Basics - Advanced CNN Architectures	
9.	Image Classification with CNNs	
10.	CNN for Object Detection and Segmentation	
11.	Project: Building a CNN-based Application	
Module 3: Generative AI with Large Language Models (LLMs)		
12.	Introduction to Generative AI	10
13.	Understanding Large Language Models	
14.	Introduction to ChaptGPT architecture and Understanding Prompt Engineering Fundamentals - Techniques for crafting prompts for different tasks	
15.	Text Generation and Summarization	
16.	Ethical Considerations and Future Trends in Generative AI	
17.	Project: Building a Generative AI Application	