

## Syllabus

Module	Topics	Hours
<b>Day 1.</b> <b>Introduction to Generative AI</b>	<ul style="list-style-type: none"> <li>• <b>Introduction to AI and Generative AI</b></li> <li>• <b>Applications of Generative AI</b></li> <li>• Evolution of Generative AI</li> <li>• Introduction to Deep Learning</li> <li>• Setting up System for GenAI Hands on session</li> <li>• Hands-on session on Neural Network using Tensorflow</li> </ul>	<b>3</b>
	<ul style="list-style-type: none"> <li>• Introduction to Large Language Models (LLM'S)</li> <li>• Introduction to Transformer Architecture</li> <li>• Exploring Commercial and Open Source Large Language Models Such as Open AI, Cohere, LLAMA, Gemeni, etc</li> <li>• Hands on session of text generation using Cohere, Prompt Templates</li> </ul>	<b>3</b>
<b>Day 2</b> <b>Hugging Face and LangChain</b>	<ul style="list-style-type: none"> <li>• Introduction to Hugging face- Open Source AI Community for NLP</li> <li>• Hands-on session by exploring various LLM's</li> <li>• Creating a multi lingual chatbot</li> <li>• Deploying multi lingual chatbot using Hugging face spacers</li> <li>• Sample programs and assignment</li> </ul>	<b>3</b>
	<ul style="list-style-type: none"> <li>• Introduction to Langchain – Framework for building LLM powered Applications</li> <li>• Development and deployment of chatbot using Langchain and Hugging face</li> <li>• Collaborating with external API's to develop GenAI Applications</li> <li>• <b>Sample programs and assignment</b></li> </ul>	<b>3</b>
<b>Day 3</b> <b>Retrieval-Augmented Generation (RAG)</b>	<ul style="list-style-type: none"> <li>• Introduction to RAG</li> <li>• Introduction to Vector Store</li> <li>• Exploring Chroma DB</li> <li>• Hands-on session on RAG and Chroma DB</li> <li>• <b>Sample programs and assignment</b></li> </ul>	<b>3</b>

	<ul style="list-style-type: none"> <li>✓ Developing Custom chatbot using RAG</li> <li>✓ Prepare data source for RAG</li> <li>✓ Configure chroma db</li> <li>✓ Developing search api</li> <li>✓ Deployment and testing</li> <li>✓ Assessment</li> </ul>	<b>3</b>
<b>Day 4 Development of Chatbot</b>	<ul style="list-style-type: none"> <li>✓ Ideation for Chatbot</li> <li>✓ Identifying suitable use case and model</li> <li>✓ Develop Gen AI model</li> <li>✓ Train and test model</li> </ul>	<b>3</b>
<b>Day 5 Demonstration and project ideas/Research work</b>	<ul style="list-style-type: none"> <li>✓ Develop front end</li> <li>✓ Integration of front end with back end</li> <li>✓ Testing</li> </ul>	<b>3</b>
	<ul style="list-style-type: none"> <li>✓ Demonstration of Chatbot</li> <li>✓ Discussion of Gen AI Project ideas/Research work</li> <li>✓ Assessment and feedback</li> </ul>	<b>4</b>