

## TOPIC

## LEARNING OBJECTIVES

<b>1</b>	Fundamentals of AI	This experiential session will touch on the fundamentals of AI, the 5 Big Ideas of AI and also provide an overview of AI technologies.
<b>2</b>	Natural Language Processing and AI : Text parameters	Learners will create an AI program that will carry out text classification and sentiment analysis based on data provided.
<b>3</b>	NLP and AI : Speech parameters	Learners will create their own AI Avatar program with speech recognition and generation functions.
<b>4</b>	Neural Networks and AI	Learners will develop an AI program that will play the "Stroop Effect" game to demonstrate how a machine can emulate the human brain to differentiate words and colors.
<b>5</b>	Perception in AI: Face Count	Learners will create an AI program that uses Speech Generation and Recognition tools to play the "Find my Birthday" game.
<b>6</b>	Impact of AI on Society	An experiential session where learners explore various scenarios and case studies to describe the ways that AI systems can be designed for inclusivity in society.
<b>7</b>	Human Interaction with AI : Language Translation	Learners will create their own AI Language Translator program that utilizes language recognition and translation tools to simulate natural language interaction between intelligent machines and humans.
<b>8</b>	Human Interaction with AI : Image Recognition	Learners will develop their own AI program that uses image classifier tools to demonstrate how perception helps in building intelligent machines with human-like reactions.
<b>9</b>	Human Interaction with AI: Conversational Agents	Learners will develop an AI "conversational agent" program that can be trained to receive and recognize input from the user and provide appropriate responses.
<b>10</b>	Machine Learning in AI : Emotion Recognition	Learners will train an AI program using computer vision and machine learning models to identify emotions from data samples of human facial expressions and classify them into appropriate emotion labels.
<b>11</b>	Machine Learning in AI : Facial Recognition	Learners will train an AI program using computer vision tools and machine learning models to recognize and sort different human face data samples.
<b>12</b>	Coded Bias [Part 1]	This experiential session will help learners use Case Study Methodology to understand how bias affects innovative and transformational knowledge about fake news, data privacy etc. and its impact on society. .
<b>13</b>	Capstone Projects	Learners will design and work on their first project using the PBL {Project Based Learning Framework} that applies AI to solve a problem with guidance from the AI facilitator using Design Thinking philosophy.
<b>14</b>		Learners will design and work on a second project using the PBL {Project Based Learning Framework} that applies AI to solve a problem with guidance from the AI facilitator using Design Thinking philosophy.

