**Course Content Outline:**

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| ***Day 1 Session 1 - Artificial Intelligence***  Introduction  History, State of the Art and Future  AI Tasks: Problem solving, search, Knowledge and Reasoning, Decision Making, Learning, Perception and Communication | ***Day 2 Session 1 - Machine Learning***  Techniques: Dimensionality Reduction  Clustering  Classification, Regression  Software Tools & Programs used  R, Python, Hadoop, SQL, SAS | ***Day 3 Session 1 - AI in Robotics***  Robotic Hardware  Robot Perceptions  Uncertain Movement Planning  Robotic Software Architectures  Application Domains |
| ***Day 1 Session 2 - Artificial Intelligence***  Applications   * Robotics * Natural Language Processing * Autonomous Vehicles * Computer Vision | ***Day 2 Session 2 - Deep Learning***  Overview & definitions  Neural Networks  Some Applications Areas | ***Day 3 Session 2 - Artificial Intelligence***  Economic Impact of AI  Functional Areas where AI is Mostly Used  Trust Factor in AI |
| ***Day 1 Session 3 - Machine Learning***  Introduction  History, State of the Art and Future  Machine Learning Algorithms  Supervised Learning  Unsupervised Learning  Reinforcement Learning | ***Day 2 Session 3 - Deep Learning***  Hyperparameter Tuning  Regularization  Optimisation  Use Case - Machine Learning / Deep Learning | ***Day 3 Session 3 - AI Project***  Project Background  Project Details  Project Objective  Project Work by Participants |
| ***Day 1 Session 4 - Artificial Intelligence***  AI Use Case | ***Day 2 Session 4 -***    Quiz | ***Day 3 Session 4 - Artificial Intelligence***  Brief Project Presentation by Participants - Interactive Review & Feedback  Summing Up |