ML Training and Certification Course

Curriculum 2 Days

Day - 1

- **Introduction to Machine Learning**
  - Definition of machine learning and its evolution
  - Overview of the different types of machine learning
  - Discussion of the potential applications of machine learning
- **Machine Learning Fundamentals**
  - Introduction to data preprocessing and cleaning
  - Overview of supervised and unsupervised learning
  - Explanation of performance metrics, such as accuracy, precision, and recall
- **Supervised Learning**
  - Introduction to supervised learning algorithms, including linear regression, logistic regression, and decision trees
  - Hands-on exercises in implementing supervised learning algorithms using Python and popular machine learning libraries, such as Scikit-Learn
- **Unsupervised Learning**
  - Introduction to unsupervised learning algorithms, including clustering and dimensionality reduction
  - Hands-on exercises in implementing unsupervised learning algorithms using Python and popular machine learning libraries, such as Scikit-Learn

Day - 2

- **Unsupervised Learning**
  - Introduction to neural networks and deep learning
  - Overview of popular deep learning architectures, such as convolutional neural networks and recurrent neural networks
  - Hands-on exercises in implementing deep learning algorithms using Python and popular deep learning libraries, such as TensorFlow
- **Natural Language Processing (NLP)**
  - Introduction to NLP and its applications
  - Overview of popular NLP techniques, such as sentiment analysis, text classification, and named entity recognition
  - Hands-on exercises in implementing NLP algorithms using Python and popular NLP libraries, such as spaCy and NLTK
- **Model Evaluation and Tuning**
  - Introduction to model evaluation techniques, such as cross-validation and hyper parameter tuning
  - Hands-on exercises in evaluating and fine-tuning machine learning models using Python and Scikit-Learn
- **Real-World Applications**
  - Discussion of real-world use cases for machine learning, including image and speech recognition, recommendation systems, and predictive modeling
  - Overview of the ethical considerations surrounding machine learning
  - Exploration of future trends in machine learning
- **Real-World Applications**
  - Recap of key takeaways from the training sessions
  - Review of additional resources for further learning and development in the ML field