Certified Machine Learning Master (CMLM)

OEM: Global Skill Development Council • Duration: 3 Days (24 hrs) • Code: GSDC-CMLM

COURSE MODULES & TOPICS

- Handling Outliers

4 Introduction to Machine Learning with Python

- What is Machine Learning?
- Introduction to Machine Learning
- Types of Machine Learning
- Basic Probability required for Machine Learning
- Linear Algebra required for Machine Learning

5 Supervised Learning: Regression

- Simple Linear Regression
- Multiple Linear Regression
- Assumptions of Linear Regression
- Polynomial Regression
- R2 and RMSE

6 Supervised Learning: Classification

- Logistic Regression
- Decision Trees
- Random Forests
- SVM
- Naïve Bayes
- Confusion Matrix

7 Dimensionality Reduction

- PCA
- Factor Analysis
- LDA

8 Unsupervised Learning: Clustering

- Types of Clustering
- K-means Clustering
- Agglomerative Clustering

9 Additional Performance Evaluation and Model Selection

- AUC / ROC
- Silhouette coefficient
- Cross-Validation
- Bagging
- Boosting

- Bias v/s Variance

10 Recommendation Engines

- Need for recommendation engines
- Types of Recommendation Engines
- Content-Based
- Collaborative Filtering

11 Association Rules Mining

- What are Association Rules?
- Association Rule Parameters
- Apriori Algorithm
- Market Basket Analysis

12 Time Series Analysis

- What is Time Series Analysis?
- Importance of TSA
- Understanding Time Series Data
- ARIMA analysis

13 Reinforcement Learning

- Understanding Reinforcement Learning
- Algorithms associated with RL
- Q-Learning Model
- Introduction to Artificial Intelligence

14 Artificial Neural Networks and Introduction to Deep Learning

- History of Neural Network
- Perceptron
- Forward Propagation
- Introduction to Deep Learning

15 Personalized Mentorship and Career Guidance

- One-on-One Mentor Connect with Subject Matter Expert
- A dedicated 1-hour session with an experienced AI/ML practitioner
- Ask specific questions about assignments, tools, or ML algorithms
- Get feedback on your project work and coding practices
- Clarify concepts or explore certification and career planning in data science

16 Tools, Certification Prep & Real-World Projects

- Hands-on Projects Using Real-World Datasets
- Tools Covered: Jupyter Notebook, Scikit-learn, TensorFlow (Intro), Git
- Sample Interview Questions and Capstone Guidance
- Certification Support: Python for Data Science, ML Certifications (Google, IBM, etc.)
- Real-World Case Studies in Retail, Finance, and Healthcare
- Model Deployment Concepts (Intro to Flask/Streamlit for ML Apps)