Aws Certified Machine Learning Specialty Course (MLS-C01)

Domain 1: Data Engineering

1.1 Collection and storage of data
1.2 Data preprocessing and cleaning
1.3 Data transformation and feature engineering
1.4 Data integration and data quality

Domain 2: Exploratory Data Analysis

2.1 Descriptive statistics
2.2 Data visualization techniques
2.3 Identifying patterns and trends
2.4 Data summarization

Domain 3: Modeling

3.1 Supervised, unsupervised, and reinforcement learning
3.2 Model selection and evaluation
3.3 Hyperparameter tuning
3.4 Training and deploying machine learning models

Domain 4: Machine Learning Implementation and Operations

4.1 Building ML pipelines
4.2 Model deployment and monitoring
4.3 Managing and maintaining ML models
4.4 A/B testing and experimentation

Domain 5: Machine Learning for Security andCompliance

5.1 Data privacy and protection
5.2 Security best practices in ML
5.3 Compliance with regulations (e.g., GDPR)
5.4 Ethical considerations in AI/ML

Domain 6: End-to-End ML Lifecycle

6.1 Problem formulation and scoping
6.2 Data gathering and labeling
6.3 Model development and evaluation
6.4 Model deployment and maintenance
6.5 Model retirement and retraining

Domain 7: AWS Machine Learning Services

7.1 Overview of AWS ML services
7.2 Using AWS tools for ML tasks

7.3 Integrating AWS services into ML workflows

Domain 8: Specialized ML Topics

8.1 Time series analysis
8.2 Natural language processing (NLP)
8.3 Computer vision
8.4 Reinforcement learning
8.5 Anomaly detection

Domain 9: AWS ML Best Practices and Design Patterns

9.1 Architectural best practices
9.2 Scalability and reliability considerations
9.3 Cost optimization for ML workloads