COURSE OUTLINE

Lesson 1: Solving Business Problems Using AI and ML

- Topic A: Identify AI and ML Solutions for Business Problems
- Topic C: Formulate a Machine Learning Problem
- Topic D: Select Appropriate Tools

Lesson 2: Collecting and Refining the Dataset

- Topic A: Collect the Dataset
- Topic B: Analyze the Dataset to Gain Insights
- Topic C: Use Visualizations to Analyze Data
- Topic D: Prepare Data

Lesson 3: Setting Up and Training a Model

- Topic A: Set Up a Machine Learning Model
- Topic B: Train the Model

Lesson 4: Finalizing a Model

- Topic A: Translate Results into Business Actions
- Topic B: Incorporate a Model into a Long-Term Business Solution

Lesson 5: Building Linear Regression Models

- Topic A: Build a Regression Model Using Linear Algebra
- Topic B: Build a Regularized Regression Model Using Linear Algebra
- Topic C: Build an Iterative Linear Regression Model

Lesson 6: Building Classification Models

- Topic A: Train Binary Classification Models
- Topic B: Train Multi-Class Classification Models
- Topic C: Evaluate Classification Models
- Topic D: Tune Classification Models

Lesson 7: Building Clustering Models

- Topic A: Build k-Means Clustering Models
- Topic B: Build Hierarchical Clustering Models

Lesson 8: Building Advanced Models

- Topic A: Build Decision Tree Models
- Topic B: Build Random Forest Models

Lesson 9: Building Support-Vector Machines

- Topic A: Build SVM Models for Classification
- Topic B: Build SVM Models for Regression

Lesson 10: Building Artificial Neural Networks

- Topic A: Build Multi-Layer Perceptrons (MLP)
- Topic B: Build Convolutional Neural Networks (CNN)

Lesson 11: Promoting Data Privacy and Ethical Practices

- Topic A: Protect Data Privacy
- Topic B: Promote Ethical Practices
- Topic C: Establish Data Privacy and Ethics Policies

Appendix A: Mapping Course Content to CertNexus® Certified Artificial Intelligence (AI) Practitioner (Exam AIP-100)

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