Iverson Associates Sdn Bhd (303330-M)
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Module Title   :   Machine Learning with Python Scikit Learn
Duration   :   3 days

What you'll learn

- Master Machine Learning on Python
- Have a great intuition of many Machine Learning models
- Make accurate predictions
- Make powerful analysis
- Make robust Machine Learning models
- Create strong added value to your business
- Use Machine Learning for personal purpose
- Handle specific topics like Deep Learning
- Handle advanced techniques like Dimensionality Reduction
- Know which Machine Learning model to choose for each type of problem

Target Audience

- Anyone interested in Machine Learning.
- Any people who are not that comfortable with coding but who are interested in Machine Learning and want to apply it easily on datasets.
- Any students in college who want to start a career in Data Science.
- Any data analysts who want to level up in Machine Learning.
- Any people who are not satisfied with their job and who want to become a Data Scientist.
- Any people who want to create added value to their business by using powerful Machine Learning tools.

Course Outline

-------------------- **Part 1: Data Preprocessing** --------------------

➢ Importing the Libraries

➢ Importing the Dataset

➢ For Python learners, summary of Object-oriented programming: classes & objects

➢ Missing Data

➢ Categorical Data

➢ Outliers

➢ Feature Engineering

➢ Splitting the Dataset into the Training set and Test set

-------------------- **Part 2: Regression (Supervised Learning)**--------------------

➢ Simple Linear Regression

➢ Multiple Linear Regression

➢ Polynomial Regression

➢ Support Vector Regression (SVR)

➢ Decision Tree Regression

➢ Random Forest Regression

➢ Evaluating Regression Models Performance

-------------------- **Part 3: Classification (Supervised Learning)** --------------------

➢ Logistic Regression

➢ K-Nearest Neighbors (K-NN)

➢ Support Vector Machine (SVM)

➢ Kernel SVM

➢ Naive Bayes

➢ Introduction to Ensemble Models

➢ Decision Tree Classification

➢ Random Forest Classification

➢ Hyperparameter Model Tuning

➢ Regularization – Ridge and Lasso

➢ Cross Validation and Model Evaluation and Selection

➢ Evaluating Classification Models Performance

-------------------- **Part 4: Clustering** --------------------

➢ K-Means Clustering

➢ Hierarchical Clustering

-------------------- **Part 5: Introduction to Deep Learning** --------------------

➢ Artificial Neural Networks

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➢ Convolutional Neural Networks

-------------------- **Part 6: Dimensionality Reduction** --------------------

➢ Principal Component Analysis (PCA)

➢ Linear Discriminant Analysis (LDA)

-------------------- **Part 7: Model Selection & Boosting** --------------------

➢ Model Selection

➢ XGBoost