

Course Code: 6A330G

Course Title: IBM Safer Payments Hands-On Modeling Training (V6.3)

## Description:

IBM Safer Payments is an innovative real-time payment fraud prevention and detection solution for all cashless payment types. IBM Safer Payments provides not only model capabilities based on inbuilt tools, but also the option to import externally built fraud models for real-time decisioning.

In this course, all of the IBM Safer Payments model capabilities are presented in details. The following modelling concepts are covered: index, profiling techniques (with and without index sequence), model components comprised of rulesets, PMML, Python and Internal Random Forest, elements of the simulation environment including Rule Generation and Internal Random Forest, as well as the sampling techniques. All these concepts will be followed by the hands-on exercises that students are expected to execute.

## Objectives:

- Mandator Structure and its elements
- Sandbox Environment
- Modeling Concepts in Safer Payments
- Index for Profiling
- Profiling based on index with sequence
- Profiling based on index without sequence
- Profiling using Formula
- Ruleset/Rule Creation/ Rule Action
- Simulation Workflow
- Simulation: Data Selection and Sampling techniques
- Simulation: Attribute usage
- Simulation: Rule Analysis
- Simulation: Rule Performance
- Simulation: Rule Scoring
- Simulation: Rule optimization
- Inbuilt Model Components: Rule Generation
- Inbuilt Model Components: Random Forest
- Supported external Model Components: PMML
- Supported external Model Components: Python
- Collusion Algorithm

## Prerequisites:

- Business knowledge
- Some familiarity with statistical models
- Understanding Safer Payments data inputs concepts

## Duration:

24 Hrs

## **Topics:**

### **Mandator Structure and its elements**

- Understand Safer Payments structure
- Answer the Hierarchy question
- Prioritization Execution

### **Sandbox Environment**

- Understand Champion/Challenger Concepts
- How to promote a model to production
- How to copy elements from other challengers
- How to revert the model in production

### **Modeling Concepts in Safer Payments**

- Understand at the high level the inbuilt techniques vs external model capabilities
- Answer the question of what are the Inbuilt Model Capabilities
- Answer the question of what are supported external Model Capability to Safer Payments

### **Index for Profiling**

- Understand the basis of profiling in Safer Payments
- Create Index without sequence
- Create Index with sequence

### **Profiling based on index with sequence**

- Understand Profiling concepts based on index with sequence
- Build a counter
- Build a precedent
- Build a pattern

### **Profiling based on index without sequence**

- Understand Profiling concepts based on index without sequence
- Build a calendar
- Build an event
- Build device identification

### **Profiling using Formula**

- Ability to create a formula

## **Ruleset/Rule Creation/ Rule Action**

- Understand Rulesets and Rules
- Build a Ruleset
- Build a Rule
- Create a Rule Action

## **Simulation Workflow**

- Understand The Simulation Environment and workflow

## **Simulation: Data Selection and Sampling techniques**

- Understand data selection for simulation
- Select data selections for simulation
- Sample the data selection
- Run the simulation

## **Simulation: Attribute usage**

- Understand the role of the attribute usage settings
- Select attributes for simulation
- Run the simulation

## **Simulation: Rule Analysis**

- Understand the concept of the Rule Analysis
- Create a Rule Analysis
- Analyse a Rule Analysis

## **Simulation: Rule Performance**

- Understand the concept of the Rule Performance
- Create a Rule Performance
- Analyse Rule Performance

## **Simulation: Rule Scoring**

- Understand the concept of the Rule Scoring
- Create a Rule Scoring

## **Simulation: Rule optimization**

- Understand the concept of Rule Optimization
- Create a Rule Optimization Report

### **Inbuild Model Components: Rule Generation**

- Understand the concept behind Rule Generation
- Understand the setting parameters
- Use of verification data set and training data set
- Use Interactive Mode for Rule Generation
- Analyse the Rule Designer parameters
- Use Fully automated Mode of Rule Generation

### **Inbuild Model Components: Random Forest**

- Understand the concept of Internal Random Forest
- Understand the setting parameters
- Use of verification data set and training data set
- Run and Analyse results

### **Supported external Model Components: PMML**

- Understand how to import a PMML model into IBM Safer Payments
- Understand how to map inputs and outputs of the model
- Understand how to use PMML for decisioning

### **Supported external Model Components: Python**

- Understand how to import a python script into IBM Safer Payments
- Use python for pre-processing rules Use python for formula
- Use python for modelling

### **Collusion Algorithm**

- Understand the concept of the Collusion Algorithm
- Understand how to set up a collusion algorithm: manually and automatically
- Create and simulate the Collusion
- How to invoke the collusion algorithm

### **Audience:**

IBM Safer Payments users (Fraud Analysts, Fraud Investigators and optional: System Administrators), IBM Lab experts, and IBM Business Partners.