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**Learning Style: On Demand**

**Provider:**

**Difficulty: Intermediate**

**Course Duration: 10 Hours**

## Quant Trading using Machine Learning



### About the course:

Instructed by a Stanford- educated, an IIT and ex-Googler, IIM - instructed ex-Flipkart lead examiner. This group has many years of real involvement with quant analytics, trading, and e-commerce.

This course adopts a totally real strategy to apply systems of Machine Learning to Quant Trading.

We should parse that.

**Completely Practical:** This course has enough hypotheses to kick you off with both Machine Learning and Quant Trading. The attention is on for all intents and purposes applying ML strategies to create classy models of Quant Trading. From setting up your own old value database in MySQL to composing many lines of Python code, the attention is on doing as it so happens.

**Machine Learning Techniques:** We'll include an assortment of techniques of machine learning, from Decision Trees and K-Nearest Neighbors to truly propelled systems like Gradient Boosted Classifiers and Random Forests. However, in Machine Learning practice isn't just about the calculations. Parameter Tuning, Feature Engineering, abstaining from overfitting; these are each of them a vital part of creating applications of Machine Learning and we do it all with this course.

**Quant Trading:** Quant Trading is an ideal model of a zone where the utilization of Machine Learning prompts a stage change in the nature of the models utilized. Conventional models frequently rely upon Excel and building sophisticated models needs a gigantic measure of manual exertion and information of the domain. Libraries of Machine Learning accessible today permit you to develop profoundly complex models that give you much better execution with considerably less exertion.

### **Course Objective:**

**Quant Trading:** Stocks, Financial Markets, Futures, Indices, Risk, Return, Momentum Investing, Sharpe Ratio, developing trading strategies with Excel, Mean Reversion, Backtesting.

**Machine Learning:** Ensemble Learning, Decision Trees, Gradient Boosted Classifiers, Random Forests, Feature engineering, Nearest Neighbors, Parameter Tuning, Overfitting.

**MySQL:** Utilizing Python, set up a historical price database in MySQL.

**Python Libraries:** Scikit-Learn, Pandas, Hyperopt, XGBoost.

### **Audience:**

- Quant dealers who have not utilized the techniques of Machine learning before to create exchanging methodologies
- Modelers, Analytics professionals, and big data professionals who need to get practical experience with Machine Learning
- Any individual who is keen on Machine Learning and needs to learn through a project-based, practical approach.

## Prerequisite:

Working information on Python is required if you need to run the source code that is given. Fundamental information on machine learning, particularly ML characterization systems, would be useful however it's not obligatory.

## Course Outline:

- You, This Course and Us
- Developing Trading Strategies in Excel
- Setting up your Development Environment
- Setting up a Price Database
- Decision Trees, Ensemble Learning and Random Forests
- A Trading Strategy as Machine Learning Classification
- Feature Engineering
- Engineering a Complex Feature - A Categorical Variable with Past Trends
- Building a Machine Learning Classifier in Python
- Nearest Neighbors Classifier
- Introduction to Quant Trading

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