

Introduction to Trading,  
Machine Learning & GCP  
Google Cloud, New York Institute  
of Finance

Overview

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# Week 1

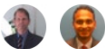
Introduction to Trading, Machine Learning & GCP

## Week 1

Discuss this week's modules here.  
83 threads · Last post 5 days ago

Go to forum

## Introduction to Trading with Machine Learning on Google Cloud



In this module you will be introduced to the fundamentals of trading. You will also be introduced to machine learning. Machine Learning is both an art that involves knowledge of the right mix of parameters that yields accurate, generalized models and a science that involves knowledge of the theory to solve specific types of problems.

Less

## Learning Objectives

- Understand the fundamentals of trading, including the concepts of trend, returns, stop-loss and volatility.
- Define quantitative trading and the main types of quantitative trading strategies.
- Understand the basic steps in exchange arbitrage, statistical arbitrage and index arbitrage.
- Outline the steps involved in back-testing a trading strategy.
- Understand what is machine learning and its applications in the real world.

Less

## Meet and Greet

Reading: Supervised Learning and Regression 10 min

Practice Quiz: Python Skills Assessment Quiz 8 questions

Resume

Video: Class Overview - Who these courses are for 1 min

Video: Course Overview Introduction to Trading with Machine Learning on Google Cloud 5 min

Reading: Welcome to Introduction to Trading, Machine Learning and GCP 10 min

## Machine Learning in Finance and your first model using Google Cloud

Video: What is AI and ML ? What is the difference between AI and ML? 58 sec

Video: Applications of ML in the Real World 1 min

Video: What is ML? 3 min

Video: Game: The importance of good data 4 min

Video: Brief History of ML in Quantitative Finance 11 min

Quiz: AI and Machine Learning 3 questions Due Feb 8, 1:59 AM CST

## Why Google Cloud Platform?

- ▶ **Video:** Why Google? 1 min
- ▶ **Video:** Why Google Cloud Platform? 2 min
- 📖 **Reading:** Case Study: Capital Markets in the Cloud 10 min
- 📋 **Practice Quiz:** Google Cloud 1 question

## Learn ML interactively with Jupyter Notebooks on Cloud AI Platform

- ▶ **Video:** What are AI Platform Notebooks 1 min
- ▶ **Video:** Using Notebooks 1 min
- ▶ **Video:** Benefits of AI Platform Notebooks 2 min
- ▶ **Video:** What do we want to model? Let's start simple 5 min
- ▶ **Video:** Demo: Building a model with BigQuery ML 25 min
- ▶ **Video:** How to use Qwiklabs for your Labs 3 min
- ▶ **Video:** Lab Intro: Building a Regression Model 37 sec
- 📄 **Ungraded External Tool:** Qwiklabs: Building a Regression Model in AI Platform Notebooks 1h
- ▶ **Video:** Lab Walkthrough: Building a Regression Model 9 min

## Trading Fundamentals: Quant Theory, Arbitrage, and Back-testing

- ▶ **Video:** Trading vs Investing 6 min
- ▶ **Video:** The Quant Universe 2 min
- ▶ **Video:** Quant Strategies 7 min
- ▶ **Video:** Quant Trading Advantages and Disadvantages 4 min
- ▶ **Video:** Exchange and Statistical Arbitrage 8 min
- ▶ **Video:** Index Arbitrage 2 min
- ▶ **Video:** Statistical Arbitrage Opportunities and Challenges 5 min
- ▶ **Video:** Introduction to Backtesting 5 min
- ▶ **Video:** Backtesting Design 6 min
- 📋 **Quiz:** Trading Concepts Review 6 questions Due Feb 8, 1:59 AM CST