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This course is part of the Machine Learning for Trading Specialization

Offered By
Google Cloud
New York Institute of Finance

Introduction to Trading, Machine Learning & GCP

★★★★★ 4.0 575 ratings • 157 reviews



Jack Farmer +1 more instructor

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About this Course

65,587 recent views

In this course, you'll learn about the fundamentals of trading, including the concept of trend, returns, stop-loss, and volatility. You will learn how to identify the profit source and structure of basic quantitative trading strategies. This course will help you gauge how well the model generalizes its learning, explain the differences between regression and forecasting, and identify the steps needed to create development and implementation backtesters. By the end of the course, you will be able to use Google Cloud Platform to build basic machine

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WHAT YOU WILL LEARN

- ✓ 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.
- ✓ Understand the application of machine learning to financial use cases.

SKILLS YOU WILL GAIN

[Finance](#) [Trading](#) [Investment](#) [Machine Learning applied to Finance](#)

Learner Career Outcomes



12% got a tangible career benefit from this course



17% got a pay increase or promotion



Shareable Certificate

Earn a Certificate upon completion



100% online

Start instantly and learn at your own schedule.



Course 1 of 3 in the Machine Learning for Trading Specialization



Flexible deadlines

Reset deadlines in accordance to your schedule.



Intermediate Level

Familiarization with basic concepts in Machine Learning and Financial Markets; advanced competency in Python Programming.



Approx. 9 hours to complete



English

Subtitles: French, Portuguese (European), Russian, English, Spanish

Instructors

Instructor rating 4.34/5 (109 Ratings) ⓘ



Jack Farmer
Curriculum Director
New York Institute of Finance
 33,086 Learners
 7 Courses



Ram Seshadri
Machine Learning Consultant
Google Cloud Platform
 26,452 Learners
 3 Courses

Offered by

Google Cloud



We help millions of organizations empower their employees, serve their customers, and build what's next for their businesses with innovative technology created in—and for—the cloud. Our products are engineered for security, reliability, and scalability, running the full stack from infrastructure to applications to devices and hardware. Our teams are dedicated to helping customers apply our technologies to create success.



New York Institute of Finance

The New York Institute of Finance (NYIF) is a global leader in training for financial services and related industries. Started by the New York Stock Exchange in 1922, it now trains 250,000+ professionals in over 120 countries. NYIF courses cover everything from investment banking, asset pricing, insurance and market structure to financial modeling, treasury operations, and accounting. The institute has a faculty of industry leaders and offers a range of program delivery options, including self-study, online courses, and in-person classes. Its US customers include the SEC, the

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Iew my mind. Each course was
rational, which encouraged me

— Lisa L.



Learning from leading scientists about what's going on in
the field right now is so much different than the
experience of reading a textbook.

— Peter W.



People interested in this course also viewed



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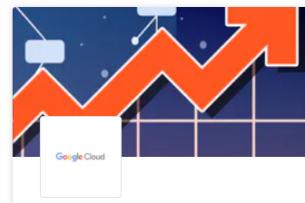
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Google Cloud

3 COURSES



Guided Tour of Machine Learning in Finance

New York University

1 COURSE



Syllabus - What you will learn from this course

Content Rating 87% (2,348 ratings) ⓘ

WEEK



4 hours to complete

1

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.



26 videos (Total 131 min), 3 readings, 5 quizzes [SEE ALL](#)

WEEK



3 hours to complete

2

Supervised Learning with BigQuery ML

In this module you will be introduced to supervised machine learning and some relevant algorithms commonly applied to trading problems. You will get some hands-on experience building a regression model using BigQuery Machine Learning



6 videos (Total 29 min), 1 reading, 3 quizzes [SEE LESS](#)

6 videos

What is forecasting? - part 1 5m

What is forecasting? - part 2 4m

Choosing the right model and BQML - part 1 3m

Choosing the right model and BQML - part 2 2m

Lab Intro: Forecasting Stock Prices using Regression in BQML 36s

Lab Walkthrough: Forecasting Stock Prices using Regression in BQML 12m



1 reading

Staying current with BigQuery ML model types 10m



1 practice exercise

Forecasting

WEEK



2 hours to complete

3

Time Series and ARIMA Modeling

In this module you will learn about ARIMA modeling and how it is applied to time series data. You will get hands-on experience building an ARIMA model for a financial dataset.



11 videos (Total 52 min) [SEE LESS](#)

11 videos

What is a time series? 7m

AR - Auto Regressive 7m

MA - Moving Average 2m

The Complete ARIMA Model 4m

ARIMA compared to linear regression 7m

How can you get a variety of models from just a single series? 1m

How to choose ARIMA parameters for your trading model 4m

Time Series Terminology: Auto Correlation 4m

Sensitivity of Trading Strategy 4m

Lab Intro: Forecasting Stock Prices Using ARIMA 32s

Lab Walkthrough: Forecasting Stock Prices using ARIMA 7m

 **1 practice exercise**

Time Series

WEEK



1 hour to complete

4

Introduction to Neural Networks and Deep Learning

In this module you'll learn about neural networks and how they relate to deep learning. You'll also learn how to gauge model generalization using regularization, and cross-validation. Also, you'll be introduced to Google Cloud Platform (GCP). Specifically, you'll be shown how to leverage GCP for implementing trading techniques.



5 videos (Total 29 min), 1 reading, 2 quizzes [SEE LESS](#)

 **5 videos**

Short history of ML: Neural Networks 7m

Short history of ML: Modern Neural Networks 8m

Overfitting and Underfitting 6m

Validation and Training Data Splits 4m

Course Recap + Preview of next course 1m

 **1 reading**

Example BigQuery ML DNN code 10m

 **2 practice exercises**

Model generalization

Recap Quiz 8m

Reviews

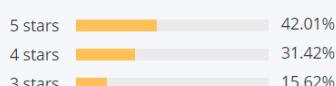
4.0 
157 reviews

TOP REVIEWS FROM INTRODUCTION TO TRADING, MACHINE LEARNING & GCP



by MS Jan 30, 2020

Excellent! But, I am missing some of the prerequisites since I just wanted to take a chance and try things out, but feel like proceeding further might lead to some stumbling blocks.



2 stars  4.86%

1 star  6.07%

★★★★★☆

by LA Jun 3, 2020

Good introduction to quant theory and ML, labs could be a lot better though, they lack proper explanations and don't cover some of the basics necessary to complete them.

★★★★★☆

by AJ Nov 21, 2020

I thought this was excellent. Some familiarity with standard SQL is needed to get the most benefit from the materials, and the course is clearly aimed at GCP users.

★★★★★☆

by DG May 5, 2020

The lectures appear to jump around a bit. Looks like it was stitched together from different places. So the course lacks a continuity I have seen in other courses.

[View all reviews](#)

About the Machine Learning for Trading Specialization

This 3-course Specialization from Google Cloud and New York Institute of Finance (NYIF) is for finance professionals, including but not limited to hedge fund traders, analysts, day traders, those involved in investment management or portfolio management, and anyone interested in gaining greater knowledge of how to

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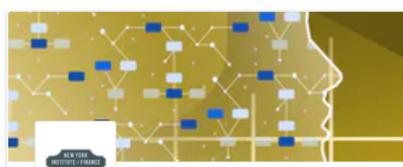
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Other courses in this Specialization



Using Machine Learning in Trading and Finance

New York Institute of Finance

1 COURSE

Reinforcement Learning for Trading Strategies

New York Institute of Finance

1 COURSE

Frequently Asked Questions

› When will I have access to the lectures and assignments?

› What will I get if I subscribe to this Specialization?

› Is financial aid available?

› Will I earn university credit for completing the Course?

More questions? Visit the [Learner Help Center](#).

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