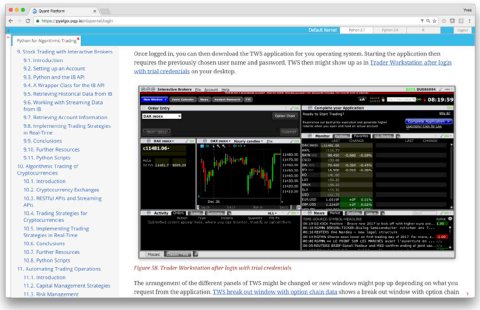
UNIVERSITY CERTIFICATE IN PYTHON FOR ALGORITHMIC TRADING

MASTERING AI-POWERED ALGO TRADING

THE PYTHON QUANTS

AI-FIRST FINANCE & TRADING



We are living in the age of artificial intelligence and of algorithms taking over many areas in our life. These trends are well illustrated in the field of algorithmic trading of financial instruments.

The ability to process tons of data and to implement trading strategies that generate alpha in the form of automated algorithms is key in this field. Due to its expressive syntax and powerful ecosystem of data analytics packages, Python ranks among the top programming languages in the algorithmic trading industry.

Almost all leading hedge funds make use of Python as a strategic element of their IT architectures. Some of the biggest banks in the world manage their trading and risk operations based on systems primarily implemented in Python.

The field offers exciting opportunities for those intending to build their own AI-based algorithmic trading business or those striving to land a job with one of the leaders in the industry.

COMPREHENSIVE PROGRAM

We at The Python Quants Group teach Python for Algorithmic Trading since many years. Based on the experience from numerous online and live training classes and programs, we have compiled a unique program that teaches you all the relevant Python elements, approaches and techniques to implement and deploy your own automated, algorithmic trading strategies. Among others, the program covers the four online trading platforms from FXCM (https://fxcm.com, for FX & CFD trading), Oanda (https://oanda.com, for CFD trading), Interactive Brokers (https://interactivebrokers.com, for stock trading) and Gemini (https://gemini.com, for cryptocurrency trading).

The classes and elements of the program include the following:

Finance with Python (6h): an introduction to finance from basic principles and a gentle introduction to Python basics based on a documentation with more than 170 pages as PDF

Python for Financial Data Science (20h): with the 2nd edition of our Python for Finance (O'Reilly) book coming out in late 2018, this central class is based on an updated code base

Python for Algorithmic Trading (50h): this online class is at the core of the program and is based on a documentation with about 470 pages as PDF and over 3,000 lines of Python code

AI & RL in Finance (25+h): one class focuses on deep learning techniques for market prediction, building neural networks from scratch and applying packages such as Keras; another class focuses exclusively on reinforcement learning for trading

Tools & Skills (20h): these classes cover important topics in setting up a Python environment, using Python and Linux development tools as well as selected best practices in coding

Tutorials (15h): exercises and test projects of different difficulty levels allow you to gain more practice and to test your skills

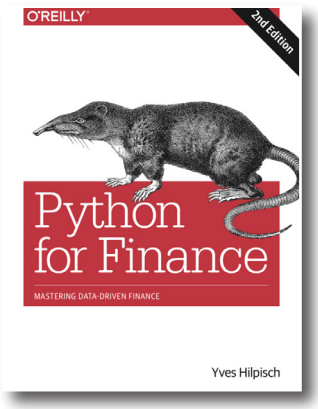
Add On Material (30+h): the Python for Databased class covers SQL and NoSQL technologies; the Python for Excel class combines the analytical power of Python with Excel; the NLP class introduces techniques for language processing

Practice Modules: program delegates take part in three practice modules, one about backtesting trading strategies and two about live trading and deployment

UNIVERSITY CERTIFICATE

The Python Quants Group has designed a unique online training program leading to the first University Certificate in Python for Algorithmic Trading. The Certificate is awarded in cooperation with the htw saar University of Applied Sciences, Germany (http://htwsaar.de).

htw saar
Hochschule für Technik und Wirtschaft des Saarlandes
University of Applied Sciences



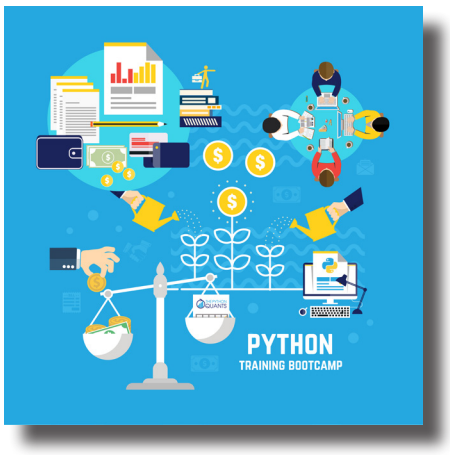
WHO IS THIS PROGRAM FOR?

Professionals: Those working already in the industry and wanting to use Python for algorithmic trading, be it in their current role or to make the next career move. We have had students from leading corporate and investment banks as well as hedge funds and asset managers.

Students & Academics: Those with educational and research interests in the field and looking for a professional online training program. The University Certificate represents 5 ECTS points in Europe which might be used in the context of a Master program in a related field.

HOW LONG IS THE PROGRAM?

The main content of the program can be studied in a self-paced manner over the course of about eight to twelve weeks. In addition, we offer participation in a one-day and one-week live trading competition. Once the student feels ready, work on the final, graded project, which is required for the Certificate can be started. The results of the project are to be documented in the form of an Jupyter Notebook. The total duration of the mainly self-paced program is about **16 weeks**. There is **no hard time limit** to finish the program or the final project. In addition, students also have **unlimited access to all the resources**.



WHAT ARE THE COSTS?

The price for the **University Certificate in Python for Algorithmic Trading** program is **2,695 EUR** (all fees net of VAT if applicable). The program starts in the week from **18. May 2020**. It can be joined at any time and can be done in a completely self-paced manner. Prepare for your next strategic career move and enroll under **https://certificate.tpq.io**. Or book the Platinum Package under **http://platinum.tpq.io**.

2,095 EUR
(until 04. April 2020)

2,365 EUR
(until 02. May 2020)

2,695 EUR
(from 03. May 2020)

What others say about our Python online training classes and programs:

"Great stuff! I just purchased it. It is the Holy Grail of algo trading! All the things that someone would have spent hours and hours of research on the web and on books, they are now combined in one source. Thank you 'Prometheus' for delivering 'fire' to mankind!"

Konstantinos Moutsioulis

"I also take the opportunity to say that you guys have the best customer service I have ever experienced in my life. You immediately reply to all emails and inquiries, let alone the world-class quality of the training material. This is the best course I have ever done in my entire life and I am recommending it to anybody."

Vito Turitto

"Five days into the curriculum, and the value so far is already worth more than the total cost of the program. Good stuff."

Eric Crittenden

"In combining theoretical rigor and technology insights and expertise, Yves and his team at The Python Quants demonstrate why they are one of the go-to groups in computational finance."

Mads Jensen

"Thanks again for the course and I must once again congratulate you on a fantastic course and learning environment with the Python Quant Platform."

Martin McGovern

"I highly recommend this class to anyone who is interested in a career in finance. The class is engaging, interesting and educational while covering advanced topics of algorithmic trading and derivative pricing. Dr. Hilpisch is a masterful instructor who demonstrates a keen interest in imparting his vast knowledge to his students."

Donald McLeod

PROGRAM DIRECTOR

Dr. Yves J. Hilpisch is founder and CEO of The Python Quants (http://tpq.io), a group focusing on the use of open source technologies for financial data science, artificial intelligence, algorithmic trading and computational finance. He is also founder and CEO of The AI Machine (http://aimachine.io), a company focused on AI-powered algorithmic trading.

He is author of the books:

- Artificial Intelligence in Finance (project, O'Reilly)
- Python for Algorithmic Trading (project, O'Reilly)
- Python for Finance, 2nd ed. (O'Reilly)
- Derivatives Analytics with Python (Wiley)
- Listed Volatility and Variance Derivatives (Wiley)

He has written the financial analytics library DX Analytics (http://dx-analytics.com) and organizes conferences, bootcamps and Meetup events about Python for finance and algorithmic trading in Frankfurt, Berlin, Paris, London and New York. He has given keynote speeches at technology conferences in the United States, Europe, India and Asia.

"... training should focus on doing rather than on knowing."
Anders Ericsson, Peak — Secrets from the New Science of Expertise.

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