Certificate Program in Python for Algorithmic Trading

Example Study Plan

Remarks:
- the table is just an **example** of how the different topics can be combined into a 12-week structured study program plus practice modules
- week 1 refers to the **starting week of the program**, i.e. to **calendar week 20 from Monday, 13. May 2019**
- it assumes an effort of about **10-15 hours per week** for live sessions, watching videos, reading documentation and self-study; some invest a bit more
- the column **PyAlgo Certificate Program** contains the main elements/videos of the program, found under the same name on the Quant Platform and maybe other trainings (such as Finance with Python Videos)
- the column **AI in Finance** refers to the materials for the class that covers machine & deep learning for Algorithmic Trading in detail
- the column **Python for Financial Data Science** refers to the materials for respective class
- the column **Tools & Skills** refers to topics related to basic tools and skills needed in software and Python development for finance and algorithmic trading; these topics are important for setting up a proper development environment and efficient development processes
- the column **Reading Material** refers to the written materials & codes found in the *Finance with Python* and *Python for Algorithmic Trading Courses* as well as in the early draft version of *Python for Finance, 2nd ed.*
- under **Live Sessions** you find the planned live sessions for the respective week; they will be announced by email invitations (in general in the week before they take place); they cover **selected important topics** or present **new/updated material** not yet available on the Quant Platform
- the column **Optional Resources** lists videos, e.g. from the classes **Python for Excel, Python for Databases** or **Natural Language Processing**, that can be watched to review or to go deeper into certain topics; they might also present topics from a different angle or with different twists
- on the Quant Platform you also find a training class called **Webinars, Talks & Special Topics** – here you find a collection of recordings from recent talks, webinars and workshops that are related to Python for Finance & Algorithmic Trading
- if you have **technical or content questions**, please use the **User Forum** on the Quant Platform
- if you have **organizational questions**, you can send us an email to training@tpq.io

W	PyAlgo Certificate Program	AI in Finance	Python for Financial Data Science	Tools & Skills	Reading Material	Live Sessions	Optional Resources
01	Finance with Python 01 Finance with Python 02	AI in Finance 01	Data Types & Structures 01	Tools & Skills 01 (Python Installation, Python Environments)	Finance with Python Chs 1-3 Python for Algo Trading Ch 1 Python for Finance Chs 1-2	Intro & Overview Q&A Session	PyExcel 01
02	Finance with Python 03 Finance with Python 04	AI in Finance 02	Data Types & Structures 02	Tools & Skills 02 (Docker Usage, Jupyter)	Finance with Python Chs 4-6 Python for Algo Trading Ch 2 Python for Finance Ch 3	tba	PyExcel 02
03	Financial Data Science 01	AI in Finance 03	Numerical Computing with NumPy	Tools & Skills 03 (Cloud Usage, Jupyter)	Python for Algo Trading Ch 3 Python for Algo Trading App Python for Finance Ch 4	tba	PyExcel 03 OOP 01
04	Financial Data Science 02	AI in Finance 04	Data Analysis with pandas	-	Python for Algo Trading Ch 3 Python for Finance Ch 5	tba	PyExcel 04 OOP 02
05	Vectorized Backtesting	AI in Finance 05	Object Oriented Programming	Tools & Skills 04 (Vim Code Editor)	Python for Algo Trading Ch 4 Python for Finance Ch 6	tba	PYDB 01 OOP 03
06	Event-based Backtesting 01 Event-based Backtesting 02	AI in Finance 06	Visualization & Financial Time Series	Tools & Skills 05 (Screen + Vim + q)	Python for Algo Trading Ch 6 Python for Finance Chs 7-8	tba	PYDB 02
07	Prediction-based Trading 01	AI in Finance 07	Input-Output Operations	Tools & Skills 06 (Doctest & Unittest)	Python for Algo Trading Ch 5 Python for Finance Ch 9	tba	PYDB 03
08	Prediction-based Trading 02	AI in Finance 08	Performance Python	Tools & Skills 07 (Git Version Control)	Python for Algo Trading Ch 5 Python for Finance Ch 10	tba	PYDB 04
09	Real-Time Data Handling Streaming Visualization	AI in Finance 09	Math Tools & Stochastics	Tools & Skills 08 (Python Packaging)	Python for Algo Trading Ch 7 Python for Finance Chs 11-12	tba	PYDB 05
10	Eikon & Oanda FXCM Trading Platform	AI in Finance 10	Statistics Dates & Times	Tools & Skills 09 (Documentation)	Python for Algo Trading Chs 8-9 Python for Finance Ch 13 & App	tba	PYDB 06
11	Interactive Brokers Gemini	AI in Finance 11	Machine Learning Basics	Tools & Skills 10 (Code Hosting/Case)	Python for Algo Trading Chs 10-11 Python for Finance Ch 13	tba	NLP 01
12	Automation Review and Case Studies	AI in Finance 12	–	–	Python for Algo Trading Ch 12	tba	NLP 02
13	Backtesting & 1 Day Live Trading Practice Module						
14	1 Week Live Trading Practice Module						
15+	Final Project Preparation						