

# Runestone Academy's Online Courses

- Available for free, and highly recommended for anyone without prior knowledge of computer programming or Python

➤ Python for Everybody – Interactive  
<https://runestone.academy/ns/books/published/py4e-int/index.html>

➤ How to Think Like a Computer Scientist: Interactive Edition  
<https://runestone.academy/ns/books/published/thinkcspy/index.html>

# Other Python Tutorials & Courses

## Tutorials

- The Official Python Tutorial. <https://docs.python.org/3/tutorial/>
- McKinney, W. (2022). Python for data analysis.  
<https://wesmckinney.com/book/>

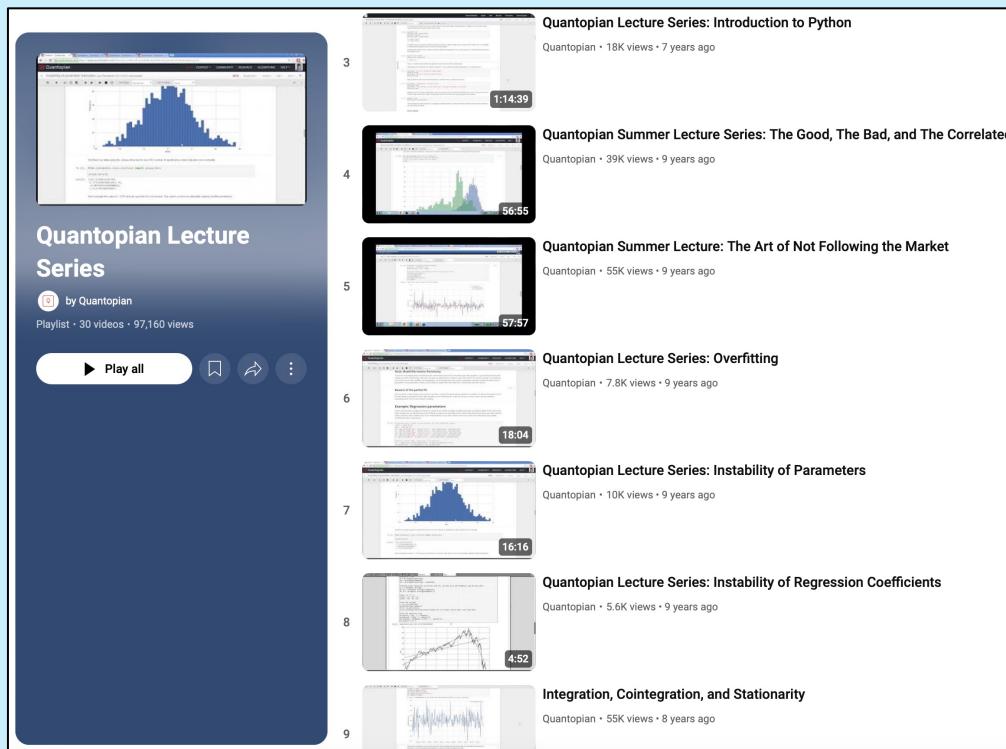
## Courses

- Data Analysis with Pandas and Python (Udemy)  
<https://www.udemy.com/course/data-analysis-with-pandas/>
- Introduction to Data Science in Python (Coursera)  
<https://www.coursera.org/learn/python-data-analysis>
- MITx: Introduction to Computer Science and Programming Using Python (audit access through edX)

# Domain-Focused: Quantitative Finance

## Quantopian Lecture Series

- Videos:  
[https://www.youtube.com/playlist?list=PLRFLF1OxMm\\_UL7WUWM31iynp0jMVf\\_vLW](https://www.youtube.com/playlist?list=PLRFLF1OxMm_UL7WUWM31iynp0jMVf_vLW)



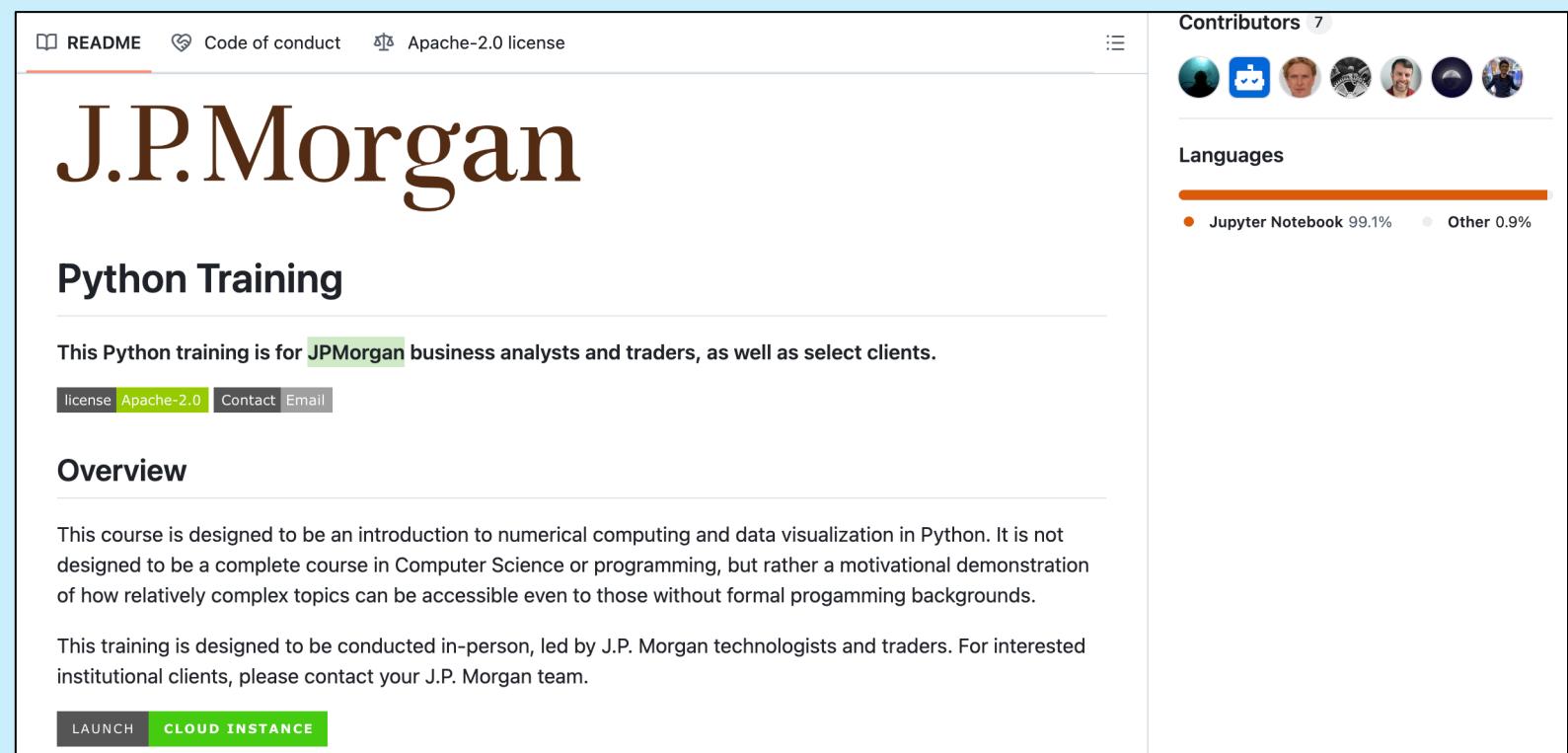
- Notebooks:  
[https://github.com/quantrocket-codeload/quant-finance-lectures/tree/master/quant\\_finance\\_lectures](https://github.com/quantrocket-codeload/quant-finance-lectures/tree/master/quant_finance_lectures)

quant-finance-lectures / quant_finance_lectures /		
brian-from-quantrocket	minor typo	f1babe4 · 7 months ago
Name	Last commit message	Last commit date
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Introduction.ipynb	update lectures for 2.10	8 months ago
Lecture01-Introduction-to-Notebooks.ipynb	update lectures for 2.10	8 months ago
Lecture02-Introduction-to-Python.ipynb	update lectures for 2.10	8 months ago
Lecture03-Introduction-to-NumPy.ipynb	update lectures for 2.10	8 months ago
Lecture04-Introduction-to-Pandas.ipynb	update lectures for 2.10	8 months ago
Lecture05-Plotting-Data.ipynb	update lectures for 2.10	8 months ago
Lecture06-Means.ipynb	update lectures for 2.10	8 months ago
Lecture07-Variance.ipynb	update lectures for 2.10	8 months ago
Lecture08-Statistical-Moments.ipynb	update lectures for 2.10	8 months ago
Lecture09-Linear-Correlation-Analysis.ipynb	update lectures for 2.10	8 months ago
Lecture10-Instability-of-Estimates.ipynb	update lectures for 2.10	8 months ago
Lecture11-Random-Variables.ipynb	update lectures for 2.10	8 months ago
Lecture12-Linear-Regression.ipynb	update lectures for 2.10	8 months ago
Lecture13-Maximum-Likelihood-Estimation.ipynb	update lectures for 2.10	8 months ago
Lecture14-Regression-Model-Instability.ipynb	update lectures for 2.10	8 months ago

# Domain-Focused: Quantitative Finance

JPMorgan  
Python  
training for  
business  
analysts  
and traders

<https://github.com/jpmorganchase/python-training>



The screenshot shows a GitHub repository page for 'J.P. Morgan Python Training'. The page title is 'J.P. Morgan' and the subtitle is 'Python Training'. The description states: 'This Python training is for JPMorgan business analysts and traders, as well as select clients.' Below the description are buttons for 'license Apache-2.0', 'Contact', and 'Email'. The 'Overview' section explains that the course is an introduction to numerical computing and data visualization in Python, designed for business analysts and traders. It mentions that the training is conducted in-person by J.P. Morgan technologists and traders. At the bottom, there are 'LAUNCH' and 'CLOUD INSTANCE' buttons. The right sidebar shows 'Contributors 7' with small profile pictures and 'Languages' with a chart showing 99.1% Jupyter Notebook and 0.9% Other. The URL in the browser bar is <https://github.com/jpmorganchase/python-training>.

# Python Quiz Preparation

- **29<sup>th</sup> January lab session, in class, first 45 minutes**
- The actual quiz will be similar in structure and content to the Practice Quiz on Canvas (which is not graded and can be retaken as many times as needed)
- After you submit the practice quiz, you'll see the correct answers and step-by-step explanations next to your responses (be sure not to skip any questions, otherwise the explanations will not show)
- This Friday's lab will cover software setup, a light GenAI introduction, the practice quiz, and any additional questions

# Python Quiz Preparation

The quiz focuses on **common pitfalls** and **tricky problems** for new programming learners, including (but not limited to):

- Understand the difference between “=” (assignment) and “==” (comparison)
- Know that comparison operators (==, >, <) take precedence over logical operators (and, or, not). Use parentheses () to avoid logical errors, as they always have the highest precedence
- Recognize the difference between `v` (a single value) and `[v]` (a list containing one element)
- Understand the distinction between methods like `[1,2].extend([3,4])` (mutates the original list) and `[1,2] + [3,4]` (creates a new list)
- Ensure proper indentation as it defines the code structure and program flow
- Avoid conflicts between global and local variables, especially inside and outside functions