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GIT

<https://www.codecademy.com/learn/learn-git>

<https://www.datacamp.com/users/sign_in?redirect=http%3A%2F%2Fapp.datacamp.com%2Flearn%2Fcourses%2Fintroduction-to-git>

<https://git-scm.com/book/en/v2>

GIT Commit Message - how to write

<https://cbea.ms/git-commit/>

How to write a good commit message by Chris Beams

Python Full Course

[Learn Python - Full Course for Beginners [Tutorial]](https://www.youtube.com/watch?v=rfscVS0vtbw&t=13416s)

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Python for beginners

[Python Tutorial for Absolute Beginners #1 - What Are Variables?](https://www.youtube.com/watch?v=Z1Yd7upQsXY)

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Python Coding Style

<https://www.python.org/dev/peps/pep-0008/>

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<https://www.dataquest.io/blog/jupyter-notebook-tips-tricks-shortcuts/>

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<https://www.earthdatascience.org/courses/intro-to-earth-data-science/open-reproducible-science/bash/bash-commands-to-manage-directories-files/>

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<https://kontext.tech/column/code-snippets/402/pandas-dataframe-plot-pie-chart>

<https://research.google/pubs/pub49953/>

Python File Write

<https://www.w3schools.com/python/python_file_write.asp>

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<https://www.mackenzieinvestments.com/content/dam/mackenzie/en/insights/wp-alts-correlation-vs-beta-en.pdf>

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<https://www.geeksforgeeks.org/python-generate-successive-element-difference-list/?ref=gcse>

Python Operators

<https://www.w3schools.com/python/python_operators.asp>

Turtle Trading Rules

<https://bigpicture.typepad.com/comments/files/turtlerules.pdf>

Numpy User Guide

<https://numpy.org/doc/stable/numpy-user.pdf>

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<https://towardsdatascience.com/data-visualization-101-how-to-choose-a-chart-type-9b8830e558d6>

Timeseries Data offset in pandas

<https://pandas.pydata.org/pandas-docs/stable/user_guide/timeseries.html#dateoffset-objects>

Dotenv

<https://pypi.org/project/python-dotenv/>

<https://www.tradersinsight.news/ibkr-quant-news/getting-started-with-ibkr-python-api/?s=09>

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Refinitive Data

[How can we give the Data Science community easy access to Refinitiv data?](https://www.youtube.com/watch?v=HbBEu2VBmyU)

A person standing in an office

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<https://www.w3schools.com/sql/sql_join.asp>

HVPlot

<https://hvplot.holoviz.org/>

Plotly Express

<https://plotly.com/python/plotly-express/>

Mapbox

<https://docs.mapbox.com/help/getting-started/access-tokens/#creating-and-managing-access-tokens>

Candlestick Charts

<https://plotly.com/python/candlestick-charts/>

Developing and Backtesting Systematic Trading Strategies by Brian

<https://www.researchgate.net/publication/319298448_Developing_Backtesting_Systematic_Trading_Strategies>

SQL Primary Key Constraint

<https://www.w3schools.com/sql/sql_primarykey.ASP>

How to export Postgres SQL table to csv file

<https://stackoverflow.com/questions/53777508/how-to-export-table-data-from-postgresql-pgadmin-to-csv-file>

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<https://www.kaggle.com/>

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<https://www.atlassian.com/git/tutorials/using-branches/git-merge>

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<https://www.datacamp.com/blog/matplotlib-cheat-sheet-plotting-in-python>

Fred - API - Data Engine

<https://fred.stlouisfed.org/docs/api/fred/>

Python Fred API

<https://pypi.org/project/fredapi/>

Python yfinance

<https://pypi.org/project/yfinance/>

Python Finta

<https://pypi.org/project/finta/0.3.3/>

Free DevOps Handbook

<https://github.com/nkatre/Free-DevOps-Books-1/blob/master/book/The%20DevOps%20Handbook%20-%20How%20to%20Create%20World-Class%20Agility%2C%20Reliability%2C%20and%20Security%20in%20Technology%20Organizations.epub>

Article on log returns - pros and cons

<https://quantivity.wordpress.com/2011/02/21/why-log-returns/>

Data source - Our World in Data

<https://ourworldindata.org/grapher/current-covid-patients-hospital?country=USA>

Data source - BLS

<https://www.bls.gov/data/>

Jupyter Notebook Slides

<https://medium.com/@mjspeck/presenting-code-using-jupyter-notebook-slides-a8a3c3b59d67>

To compare text based files

<https://www.scootersoftware.com/features.php>

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<https://jupytext.readthedocs.io/en/latest/>

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<https://www.alpharithms.com/autocorrelation-time-series-python-432909/>

Forecasting - Principles and Practise

2nd edition

<https://otexts.com/fpp2/>

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<https://otexts.com/fpp3/>

P-value in Statistical Analysis

<https://www.statisticshowto.com/probability-and-statistics/statistics-definitions/p-value/>

AIC

<https://towardsdatascience.com/introduction-to-aic-akaike-information-criterion-9c9ba1c96ced>

To review stats concepts - multiple videos

<https://www.youtube.com/c/joshstarmer/playlists>

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ARIMA Model

<https://people.duke.edu/~rnau/arimrule.htm>

Common Metrics for Time Series

<https://joydeep31415.medium.com/common-metrics-for-time-series-analysis-f3ca4b29fe42>

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<https://cran.r-project.org/web/packages/MSGARCH/MSGARCH.pdf>

Linear regression - Scikit Learn

<https://scikit-learn.org/stable/modules/generated/sklearn.linear_model.LinearRegression.html>

Andrew Yung Machine Learning

<https://www.coursera.org/learn/machine-learning#syllabus>

Article on Python for Data Analysis

<https://wesmckinney.com/book/?s=09>

Quantitative and Algo trading - blog post on machine learning

<https://blog.quantinsti.com/machine-learning-application-forex-markets-working-models/>

Connected Papers in a Visual Graph

<https://www.connectedpapers.com/>

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<https://www.kaggle.com/jasenmackie/eda-logistic-torch-r>

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<https://www.youtube.com/channel/UCe2PjkQXqOuwkW1gw6Ameuw/videos>

SMOTE

<https://imbalanced-learn.org/stable/over_sampling.html#smote-adasyn>

SMOTE vs Random Undersampling - article

<https://www.irjet.net/archives/V4/i8/IRJET-V4I857.pdf>

Cluster-centroids

<https://imbalanced-learn.org/stable/under_sampling.html#cluster-centroids>

Multiple undersampling techniques

<https://imbalanced-learn.org/stable/auto_examples/under-sampling/plot_comparison_under_sampling.html#sphx-glr-auto-examples-under-sampling-plot-comparison-under-sampling-py>

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<https://machinelearningmastery.com/multinomial-logistic-regression-with-python/>

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<https://opensourcequant.wordpress.com/2022/01/08/modeling-intent-in-r-and-or-python/>

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<https://docs.python.org/2/reference/expressions.html#set-displays>

Coursera Course on Machine Learning by Andrew Ng

<https://www.coursera.org/learn/machine-learning>

NLP Introduction video

[Lecture 01 — NLP Course Introduction — [ NLP || Dan Jurafsky || Stanford University ]](https://www.youtube.com/watch?v=oWsMIW-5xUc&list=PLLssT5z_DsK8HbD2sPcUIDfQ7zmBarMYv)

Graphical user interface

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Any Function in Python

<https://stackoverflow.com/questions/16505456/how-exactly-does-the-python-any-function-work/16505590#16505590>

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Chatbot conversations for scripts - AWS

<https://github.com/amunategui/Chatbot-Conversations/blob/master/Chatbot-Conversations.ipynb>

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<https://stackoverflow.com/questions/50487495/what-is-difference-between-en-core-web-sm-en-core-web-mdand-en-core-web-lg-mod>

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Hyperparameter tuning using Sklearn

<https://scikit-learn.org/stable/modules/generated/sklearn.pipeline.Pipeline.html>

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<https://github.com/Rishi0812/MacroDiffusionIndex>

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<https://www.amazon.ca/Multivariate-Time-Analysis-Financial-Applications/dp/1118617908>

Interesting Interview on Crypto

<https://frontmonth.substack.com/p/jim-greco-on-hft-crypto-and-starting?utm_source=url>

Lamda Function

<https://docs.aws.amazon.com/lex/latest/dg/lambda-input-response-format.html>

Amazon Lex Bots

<https://docs.aws.amazon.com/lex/latest/dg/examples.html>

Writing a custom loss function

<https://medium.com/@Bloomore/how-to-write-a-custom-loss-function-with-additional-arguments-in-keras-5f193929f7a0>

Thematic Investing with Big Data

<https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3991158>

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<https://www.linkedin.com/pulse/choosing-number-hidden-layers-neurons-neural-networks-sachdev/>

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<https://www.amazon.ca/Algorithmic-Trading-Methods-Applications-Optimization-dp-0128156309/dp/0128156309/ref=dp_ob_title_bk>

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<https://www.researchgate.net/publication/319298448_Developing_Backtesting_Systematic_Trading_Strategies>

JP Morgan paper on reinforced learning

<https://arxiv.org/pdf/1811.09549.pdf>

Geometric Brownian Motion - to create stock data for testing

<https://www.analyticsvidhya.com/blog/2021/05/create-a-dummy-stock-market-using-geometric-brownian-motion-in-python/>

Trading System and Analysis

Some useful resources:

* [Trading Systems 2nd edition: A new approach to system development and portfolio optimisation](https://www.amazon.ca/Trading-Systems-2nd-development-optimisation/dp/085719755X/ref=asc_df_085719755X/?tag=googleshopc0c-20&linkCode=df0&hvadid=378350457287&hvpos=&hvnetw=g&hvrand=7135307924867732505&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9000833&hvtargid=pla-848044786036&psc=1)
* For a critical view on TA by David Bailey who has co-authored numerous papers with Marcos Lopez de Prado -  <https://mathinvestor.org/2019/05/technical-analysis-in-major-brokerages-and-financial-media/>
* Han, Yufeng, Ke Yang, and Guofu Zhou. 2013. “A New Anomaly: The Cross-Sectional Profitability of Technical Analysis.” Journal of Financial and Quantitative Analysis 48 (05): 1433–61.
* Lo, Andrew W, Harry Mamaysky, and Jiang Wang. 2000. “Foundations of Technical Analysis: Computational Algorithms, Statistical Inference, and Empirical Implementation.” The Journal of Finance 55 (4): 1705–70. http:[/](https://utorvirtfinpt-i0c8572.slack.com/citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.134.1546&rep=rep)/citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.134.1546&rep=rep1&type=pdf
* "Does Intraday Technical Analysis in the US Equity Market Have Value?” Journal of Empirical Finance 15 (2): 199–210.
* Weissman, Richard L. 2005. Mechanical Trading Systems: Pairing Trader Psychology with Technical Analysis. Vol. 220. John Wiley & Sons.
* Aronson, David. 2006. Evidence-Based Technical Analysis: Applying the Scientific Method and Statistical Inference to Trading Signals. Wiley.

JP Morgan Back testing tool

<https://github.com/jpmorganchase/bt>

Link to Finta

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<https://pypi.org/project/finta/>

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<https://cran.r-project.org/web/packages/TTR/TTR.pdf>

Alpha Engine - Designing an automated trading algorithm

<https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2951348>

Quantitative Strategy Evaluation by Brian Peterson

<http://past.rinfinance.com/agenda/2018/BrianPeterson.html#1>

--> <https://github.com/braverock/quantstrat>

Psuedo-Mathematics and Financial Charlatanism

<https://www.ams.org/notices/201405/rnoti-p458.pdf>

Quantitative approach to tactical asset allocation

<https://papers.ssrn.com/sol3/papers.cfm?abstract_id=962461>

Exploring Classic Quantitative Strategies

<https://www.researchgate.net/publication/358814547_Exploring_Classic_Quantitative_Strategies>

Structure of Quantitative Strategies - link to Slack - no direct weblink found…

<https://utorvirtfinpt-i0c8572.slack.com/archives/C02HYGDSMBM/p1645968091680589>

Proof Engineering

<https://link.medium.com/HxjDtMnZ2nb>

Intro to Options trading

<https://www.amazon.com/Introduction-Options-Trading-Frans-Weert/dp/0470029706>

Time Series Momentum

<https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2089463>

SSRN - Research Papers

<https://www.ssrn.com/index.cfm/en/>

Interactive Brokers API

<https://www.interactivebrokers.com/en/trading/ib-api.php>

Why Scale?

<https://stats.stackexchange.com/questions/111467/is-it-necessary-to-scale-the-target-value-in-addition-to-scaling-features-for-re#:~:text=Generally%2C%20It%20is%20not%20necessary,even%20if%20they%20are%20strong>

Petroleum Price schedule

<https://www.eia.gov/petroleum/supply/weekly/schedule.php>

Markdown Cheatsheet

<https://github.com/adam-p/markdown-here/wiki/Markdown-Cheatsheet>

Streamlit

<https://docs.streamlit.io/library/get-started/main-concepts>

Web3py

<https://web3py.readthedocs.io/en/stable/>

Bitcoin Cash - News article

<https://www.cnbc.com/2017/07/26/some-bitcoin-backers-are-defecting-to-create-a-rival-currency.html>

Netflix Tech Blog

<https://netflixtechblog.com/notebook-innovation-591ee3221233>

Decorators and functions

<https://peps.python.org/pep-0318/>

Tutorial for digital resume

[Django Tutorial - Create a Digital Resume with a Python Backend](https://www.youtube.com/watch?v=0oSsLbh_Kv4)

A person smiling for the camera

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Python Dataclasses

<https://docs.python.org/3/library/dataclasses.html>

Cracking the coding interview

<https://www.amazon.ca/Cracking-Coding-Interview-Programming-Questions/dp/0984782850/ref=asc_df_0984782850/?tag=googleshopc0c-20&linkCode=df0&hvadid=293006031037&hvpos=&hvnetw=g&hvrand=18425875945857657357&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9000837&hvtargid=pla-388890317700&psc=1>

Coding interview problems

[10 Common Coding Interview Problems - Solved!](https://www.youtube.com/watch?v=Peq4GCPNC5c)

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Advanced Git course

[Advanced Git Tutorial - Interactive Rebase, Cherry-Picking, Reflog, Submodules and more](https://www.youtube.com/watch?v=qsTthZi23VE)

Diagram, icon

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Self in Python

<https://www.programiz.com/article/python-self-why>

Tutorial on Python Classes

<https://docs.python.org/3/tutorial/classes.html>

Python Classes and Object

<https://www.w3schools.com/python/python_classes.asp>

Lorem Ipsum - Dummy text creator

<https://www.lipsum.com/>

<https://baconipsum.com/>

<http://www.cupcakeipsum.com/>

Object Oriented Programming with Python

[Object Oriented Programming with Python - Full Course for Beginners](https://www.youtube.com/watch?v=Ej_02ICOIgs)

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Hashes - Intro

[Hashes 1 Introduction](https://www.youtube.com/watch?v=uW8-HkmNq4Q&list=PLpPXw4zFa0uKKhaSz87IowJnOTzh9tiBk&index=26)

A person standing in front of a screen with text

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PDF on Byzantine Generals

<https://lamport.azurewebsites.net/pubs/the-byz-generals.pdf>

Consensus Mechanism

<https://ethereum.org/en/developers/docs/consensus-mechanisms/>

Irreversible Transactions

<https://en.bitcoin.it/wiki/Irreversible_Transactions>

Streamlit Cache

<https://docs.streamlit.io/library/api-reference/performance/st.cache#advanced-caching>

Proof of Work

<https://en.bitcoin.it/wiki/Proof_of_work>

Proof of Work

<https://ethereum.org/en/developers/docs/consensus-mechanisms/pow/>

Web3py

<https://web3py.readthedocs.io/en/stable/>

 Web3py Examples

<https://web3py.readthedocs.io/en/stable/examples.html>

Mempool Explorer

<https://explorer.blocknative.com/?v=1.30.7&0=ethereum&1=main>

Ethereum Gas Explained

<https://defiprime.com/gas>

Anaconda Archive

<https://repo.anaconda.com/archive/>

Blockchain Development Suite

<https://infura.io/>