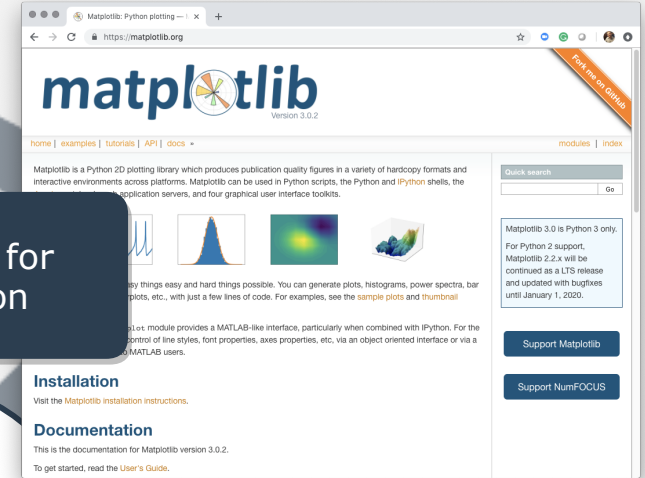
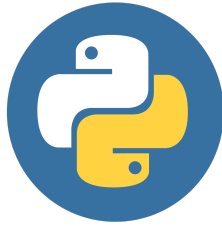


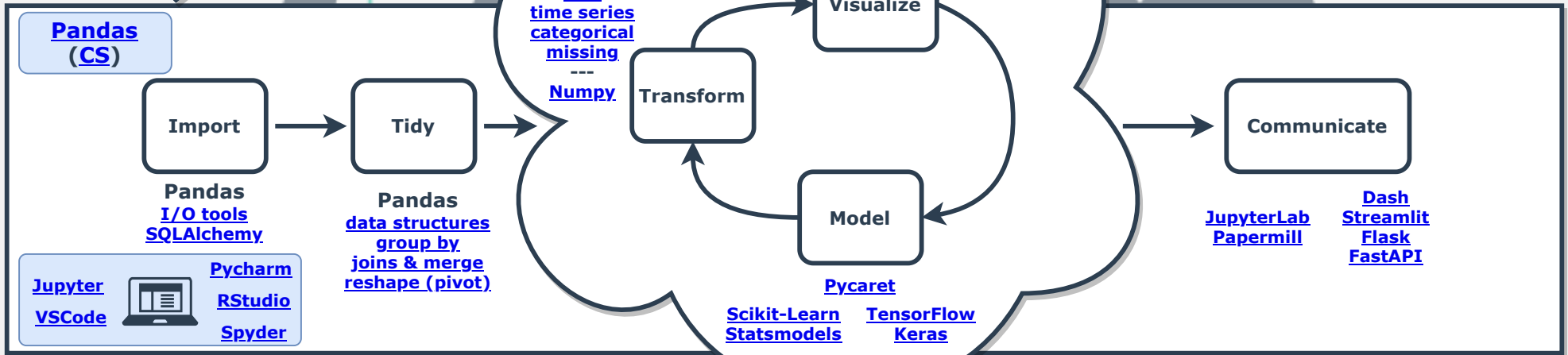
# Data Science with Python Workflow

If you want to learn Python, then join our course: [Python for Data Science Automation \(DS4B 101-P\)](#).



Click the links for Documentation

CS = Cheat Sheet



## Important Resources

- Anaconda Distribution: <https://www.anaconda.com/download/>
- Python Documentation: <https://docs.python.org/>
- Python Standard Library: <https://docs.python.org/3/library>

Join the [Python for Data Science Automation Course](#)



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# Data Science with



## Special Topics

### Time Series Forecasting

- [sktime](#) - Scikit-Learn Extension for Time Series
- [statsmodels](#) - Time Series Analysis
- [GluonTS](#) - MXNet/Gluon Deep Learning for Time Series

### Time Series Features

- [TSFresh](#) - Time Series Feature Engineering
- [tslearn](#) - Time Series Features
- [Pandas](#) Time Series
- [Arrow](#) - Human-Friendly Time

### EDA

- [pandas-profiling](#), [SweetViz](#), [lux](#)

### Web

- [beautifulsoup](#) - Extract data from HTML
- [requests-html](#) - HTML Parsing
- [scrapy](#) - Web crawling

### MS Office & PDF

- [XlsxWriter](#) - Create Excel Workbooks
- [pyexcel](#) - Read/Write Excel
- [xlwings](#) - Call python from Excel
- [python-docx](#) - Word Documents
- [python-pptx](#) - PowerPoint Documents
- [pdfminer](#) - Text extraction from PDF
- [textract](#) - Extract text from any document
- [PyPDF2](#) - Create PDF documents
- [gsppread](#) - Google Sheets

### Text Analysis & NLP

- [NLTK](#) - Text Tokenization & Modeling
- [spaCy](#) - NLP using Cython for Speed
- [fuzzywuzzy](#) - Fuzzy String Matching

### Recommendation Systems

- [Annoy](#) - Approximate Nearest Neighbors
- [LightFM](#) - Popular recommendation algo's.

### Apps & APIs

- [FastAPI](#) - Web framework for building APIs in Python
- [Flask](#) - Web Development
- [Dash](#) & [Streamlit](#) - DS Web Frameworks

### MLOps

- [Pycaret MLFlow Integration](#)
- [MLFlow](#) - Machine Learning Lifecycle, Tracking, Deployment
- [MetaFlow](#) - Scalable AWS Jobs for Data Scientists

### Cloud

- [boto3](#) (AWS) - AWS Python SDK
- [Google Cloud](#) - GCP Python SDK
- [Azure](#) - Azure Python SDK

### ETL & Automations

- [Airflow](#) - Workflow Scheduling & Monitoring
- [Luigi](#) - Batch Job Tool, Scheduling, Monitoring
- [Ansible](#) - Deployment Automation
- [JobLib](#) - Run python jobs

### Machine Learning

- [Scikit-Learn](#) - ML in Python
- [H2O](#) - Scalable & AutoML
- [TPOT](#) - TPOT Automated ML Tool
- [PyCaret](#) - PyCaret Low Code ML
- [Dask ML](#) - Scalable ML with Dask
- ML Packages: [XGBoost](#), [LightGBM](#), [CatBoost](#)

### Feature Engineering

- [Sklearn Data Transformations](#)
- [sklearn-pandas](#) - Sklearn Extension for Pandas
- [Featuretools](#) - Automated Feature Engineering
- [category\\_encoders](#) - Categorical Encoding
- [imbalanced-learn](#) - Resampling for Imbalanced
- [fancyimpute](#) - Extended imputation strategies

### Deep Learning

- [TensorFlow](#) & [Keras](#)
- [PyTorch](#)
- [MXNet](#), [Gluon](#), & [GluonTS](#)
- [OpenAI Gym](#) - Reinforcement Learning

### Image & Comp Vision

- [OpenCV](#) - Open Source Computer Vision
- [Scikit Image](#) - Image Processing
- [Pillow](#) - Python Imaging Library

### Speed & Scale

- [datatable](#) - C++ Speed Up
- [Dask \(CS\)](#) - Parallel Pandas & Scikit Learn
- [RAPIDS \(CS\)](#) - GPU Accelerated Pandas
- [PySpark](#) - Spark Clusters
- [Optimus](#) - PySpark Extension for Humans

### Coming from R?

- [R-to-Pandas Comparison](#)
- [siuba](#) & [plydata](#) - dplyr/tidyr ports
- [datatable](#) - data.table port
- [plotnine](#) - ggplot2 port

