

Python Basics, Programming Fundamentals, and Introduction to Numerical Linear Algebra

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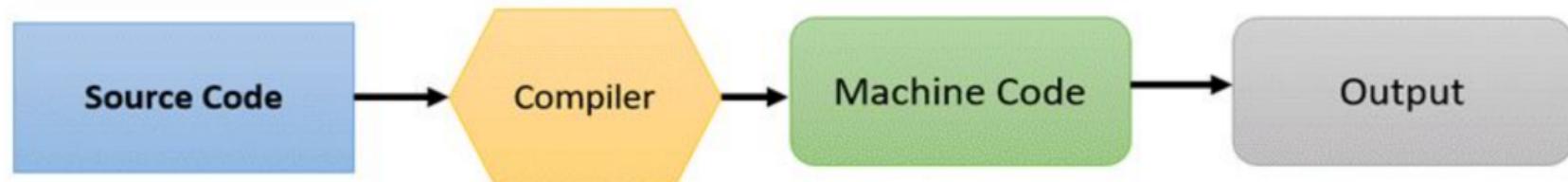
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Programming Languages

There are two types:

- **Compiled Languages** minimize computing time (e.g. C/C++, Fortran)



- **Interpreted Languages** minimize human coding time (e.g. Python, R, MATLAB)



What is Python?

- **high-level interpreted language** : source code of a Python program is converted into bytecode that is then executed by the Python virtual machine
- **dynamically-typed** : variable types are determined and checked at runtime rather than during compilation
- **garbage collector** : automatic memory management
- created by **Guido van Rossum** and first released on 20 February 1991
- named after the 1970s BBC comedy series "Monty Python's Flying Circus"

Work offline...

- Install anaconda (with jupyter support)

<https://www.anaconda.com/download>



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For installation assistance, refer to [Troubleshooting](#).

Download Distribution by choosing the proper installer for your machine.

Download for Mac



Anaconda Installers



Work online...

■ Google Colab (<https://colab.google.com>)

- a hosted Jupyter Notebook service that requires no setup to use and provides free access to computing resources
- suited for machine learning, data science, and education



Google Collaboratory

Colab is a hosted Jupyter Notebook service that requires no setup to use and provides free access to computing resources, including GPUs and TPUs. Colab is especially

[https://github.com/rhudaina/
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Thank you for your attention!