

Deep Learning - Hello Python

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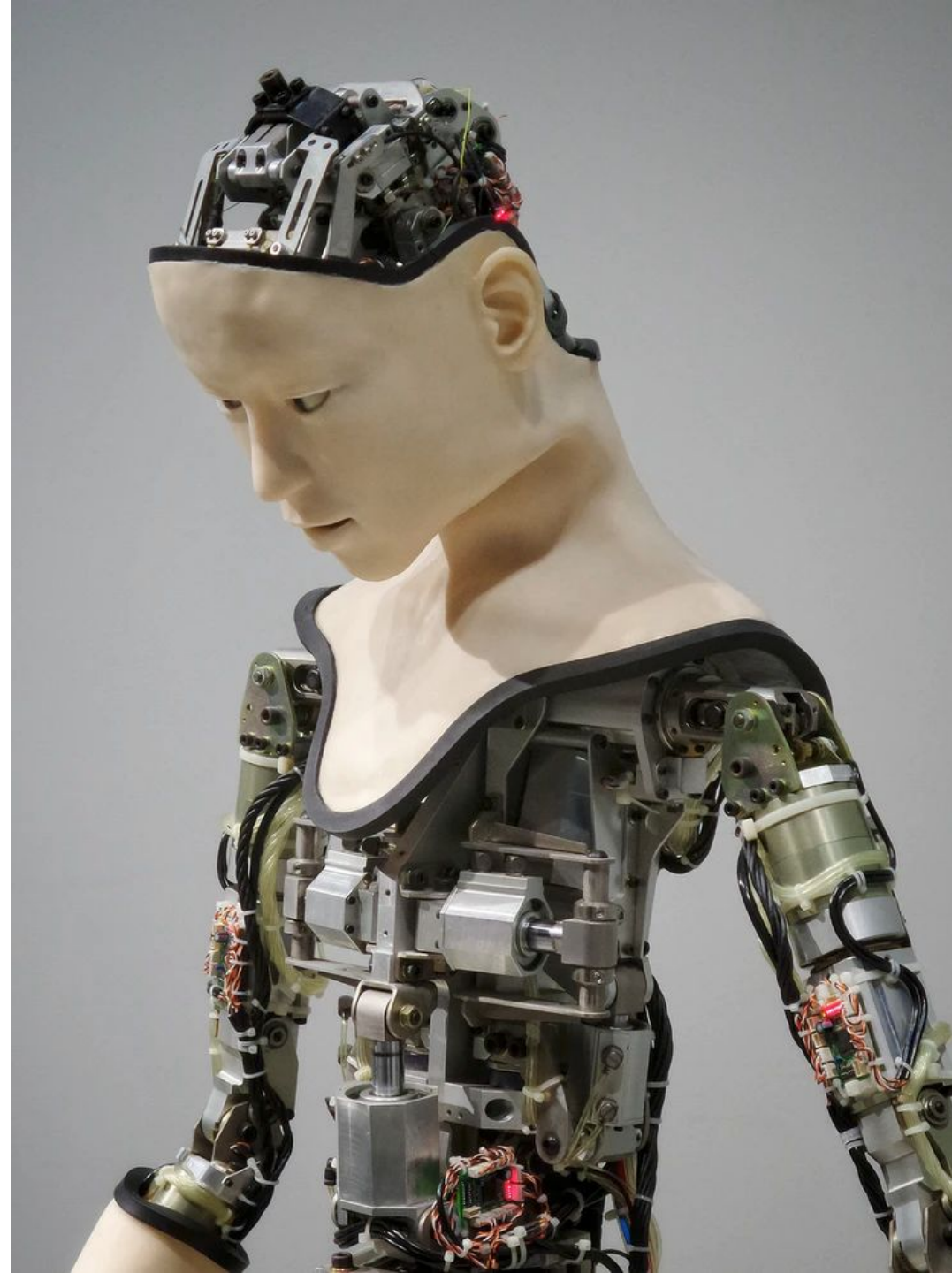
Our Robots

Tesaro, August
and Anna



Goal for today

- Warm Up
- Setup a deep learning environment
- Learn a bit about package management in Python
- Write a few lines python code





Warm Up

Do you have any Python
knowledge?

How many lines of
Python code did you write?

I have a PC with an current Nvidia
CPU.

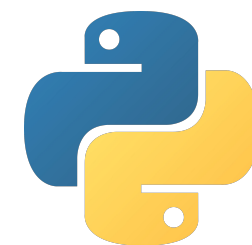
When one teaches, two learn.

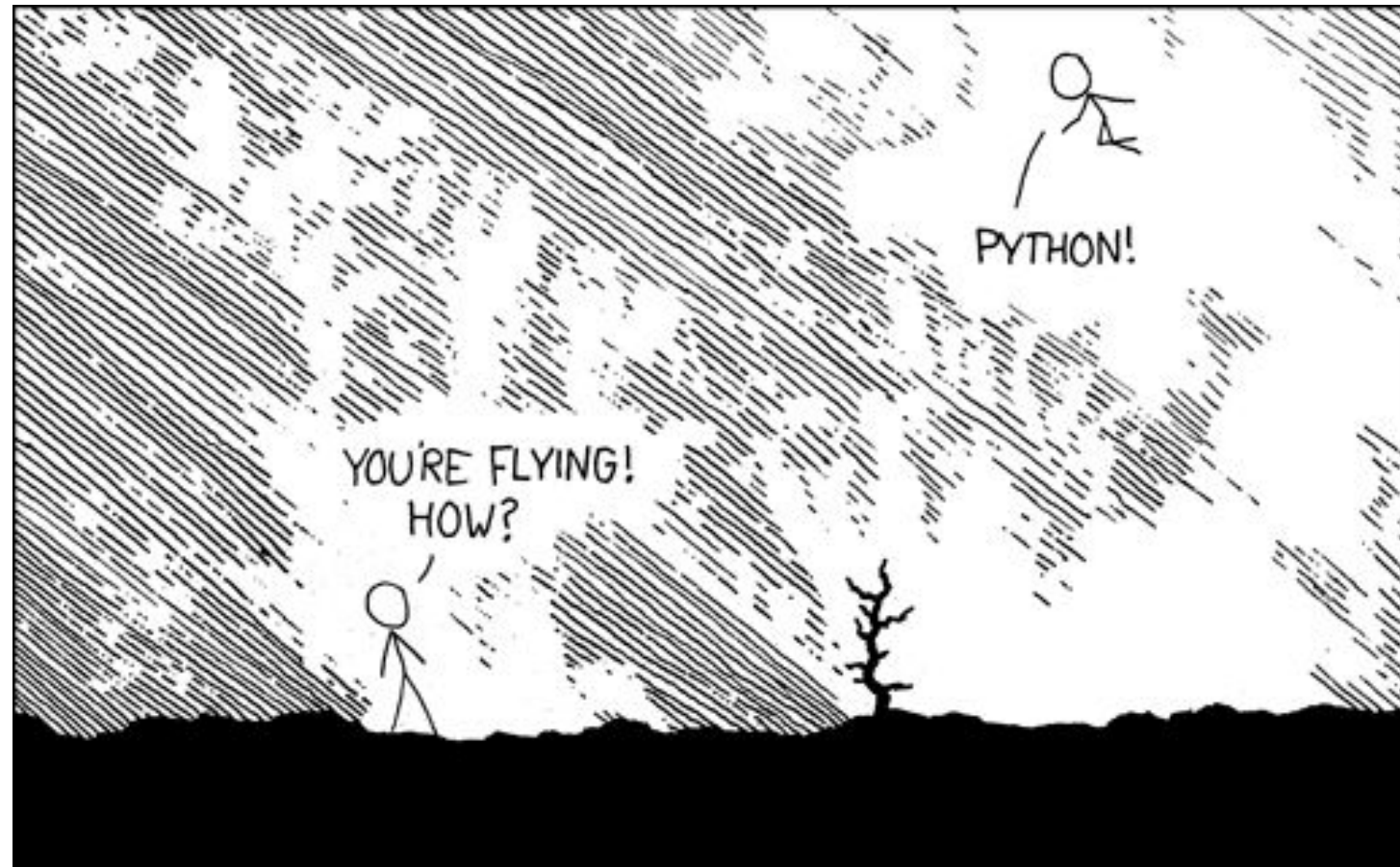
Robert A. Heinlein



About Python

- 1990 created by Guido van Rossum
- Functional / Imperative / Object-oriented
- Dynamic / Duck typing
- Interpreted Language
- Default language for many ML / DL Frameworks
 - TensorFlow
 - PyTorch
 - Keras





Why Python?

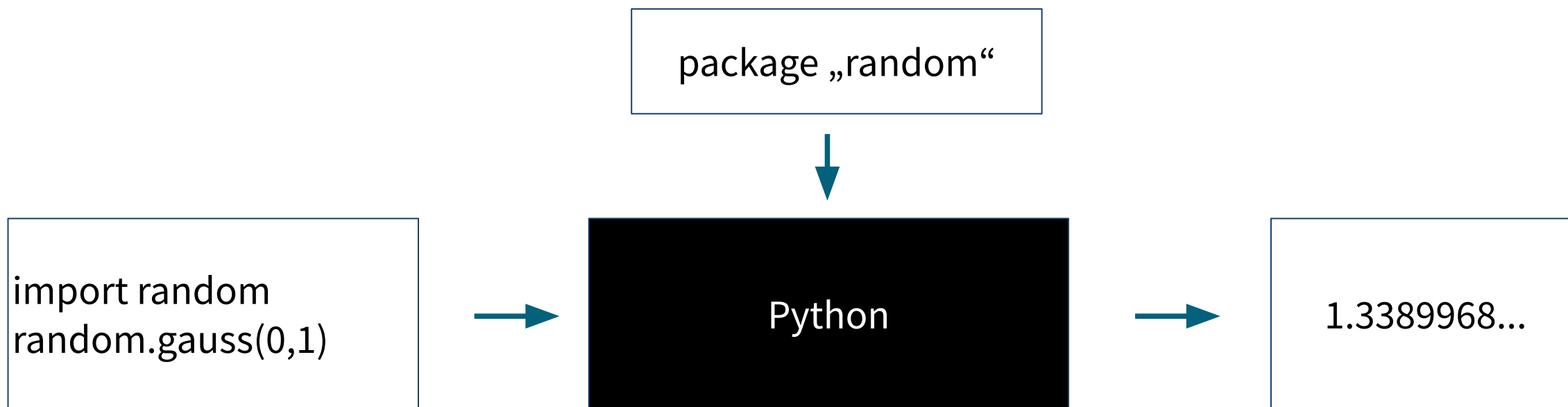
- C is fast at run time but slow to write
- Python is slower at runtime but fast to write
- Idea:
 - Write computational heavy code in C/C++
 - Prototype in Python

The Zen of Python

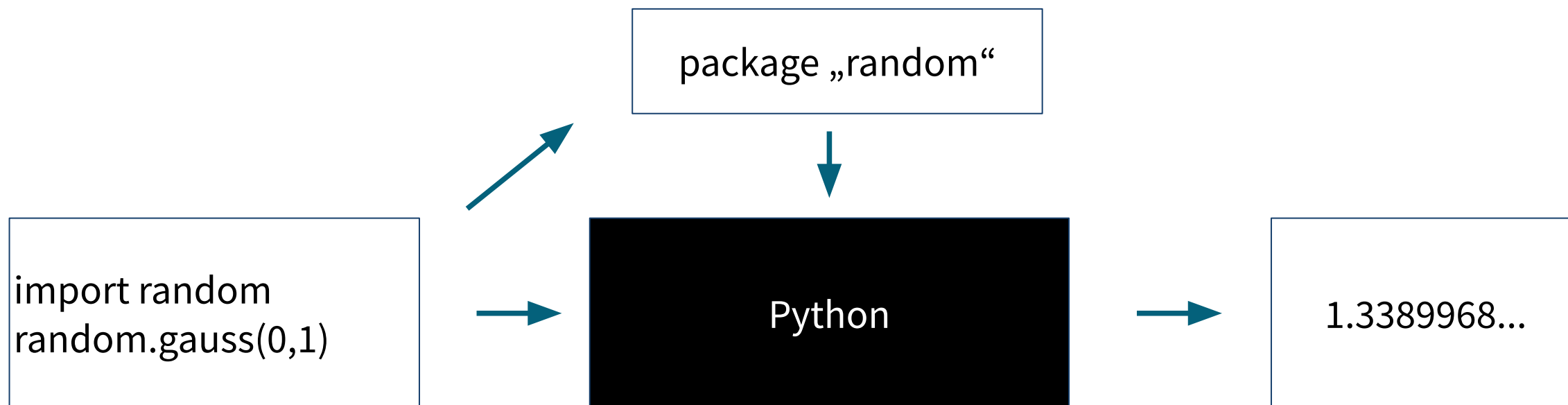
- If the implementation is hard to explain, it's a bad idea.
- If the implementation is easy to explain, it may be a good idea.
- To read more type “import this”

Python and packages

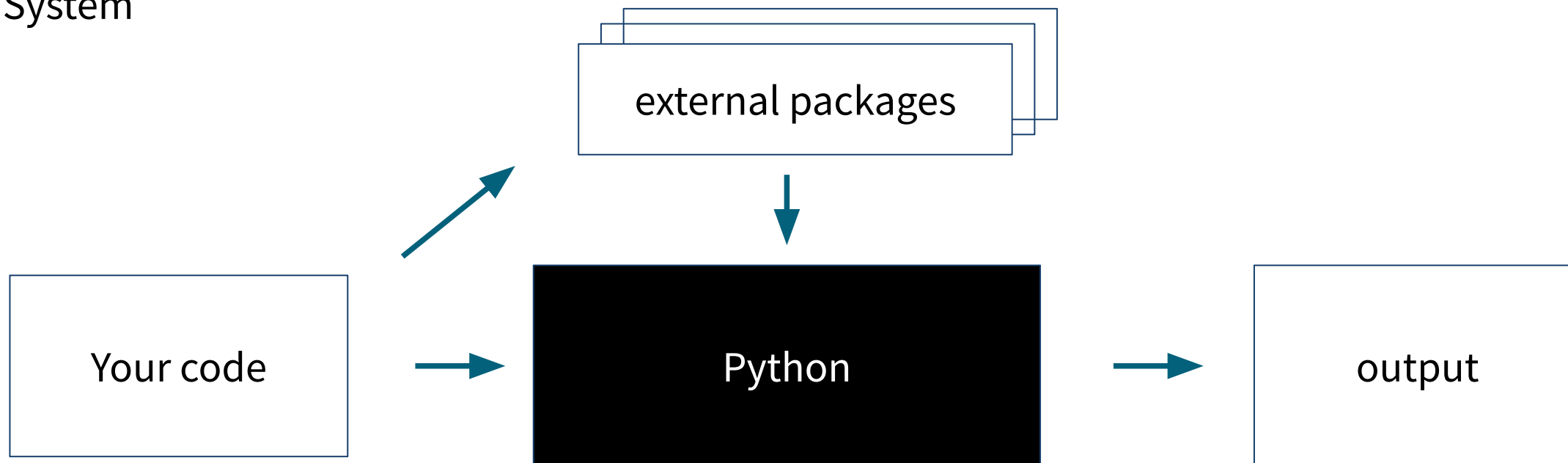




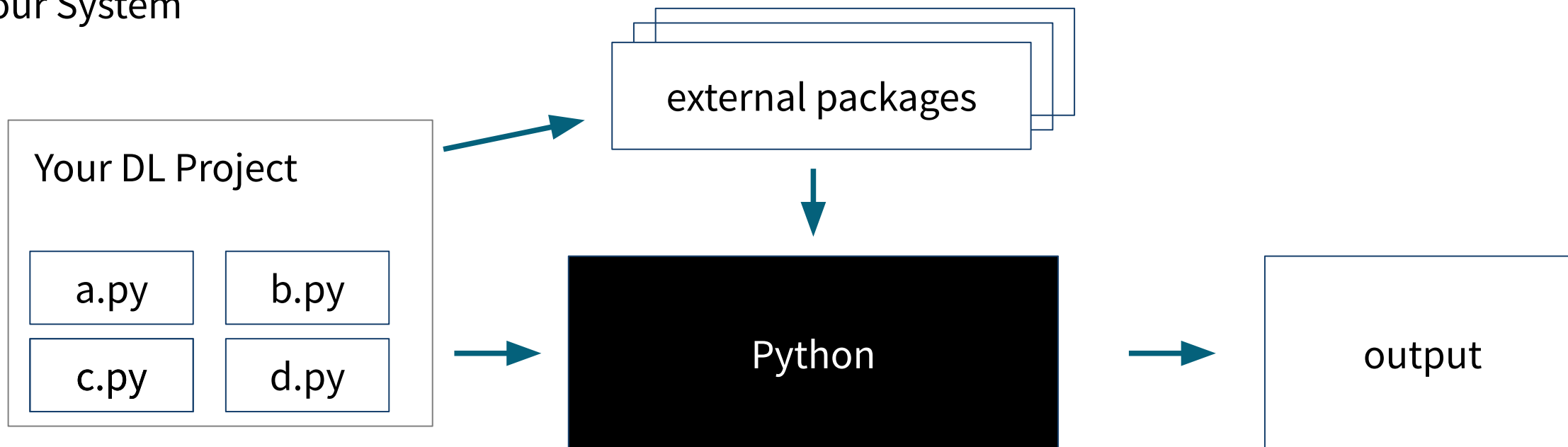
Your System



Your System

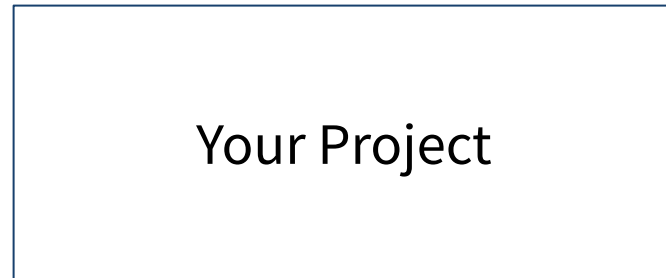


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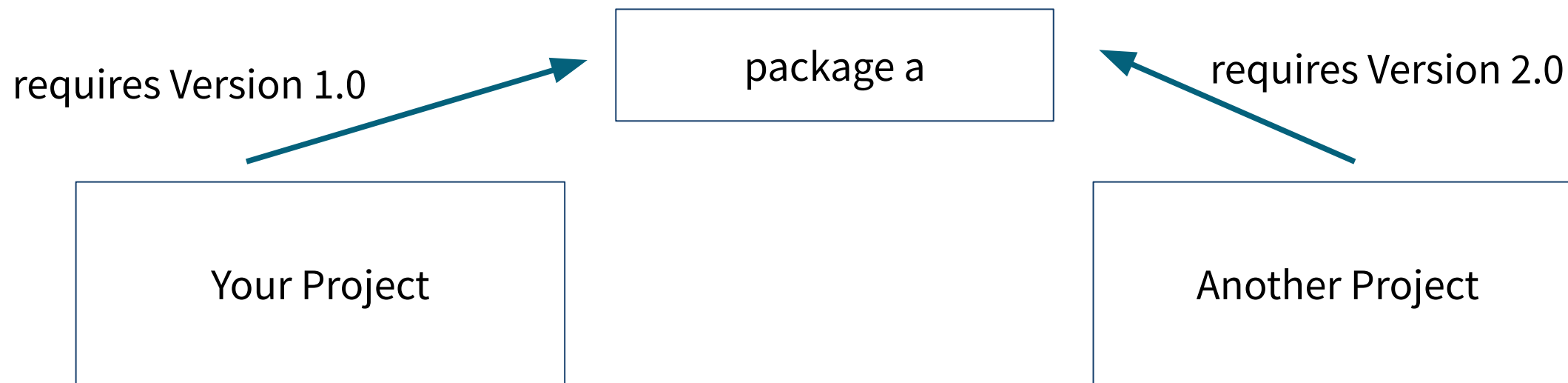
requires Version 1.0



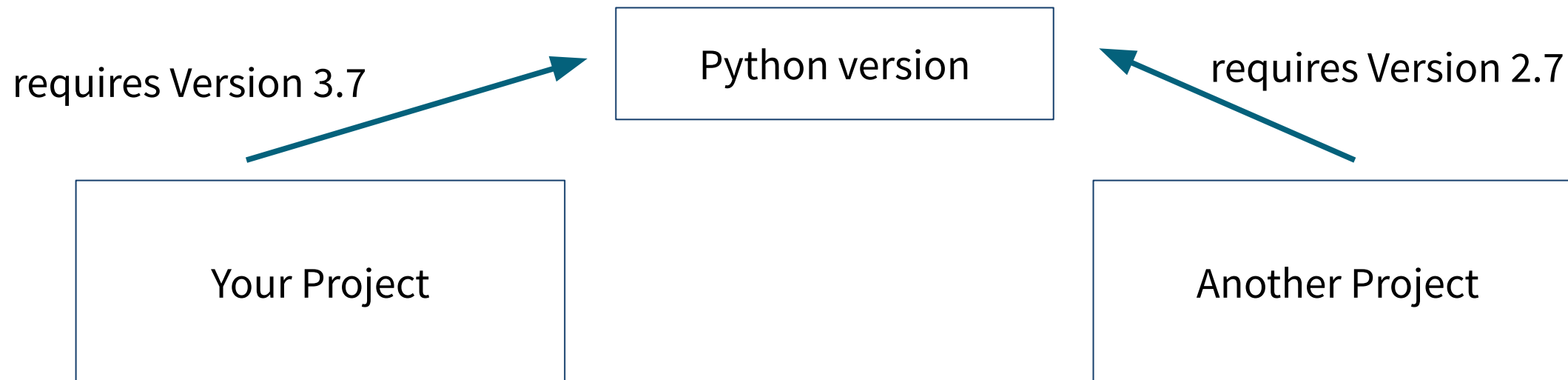
Your Project

package a

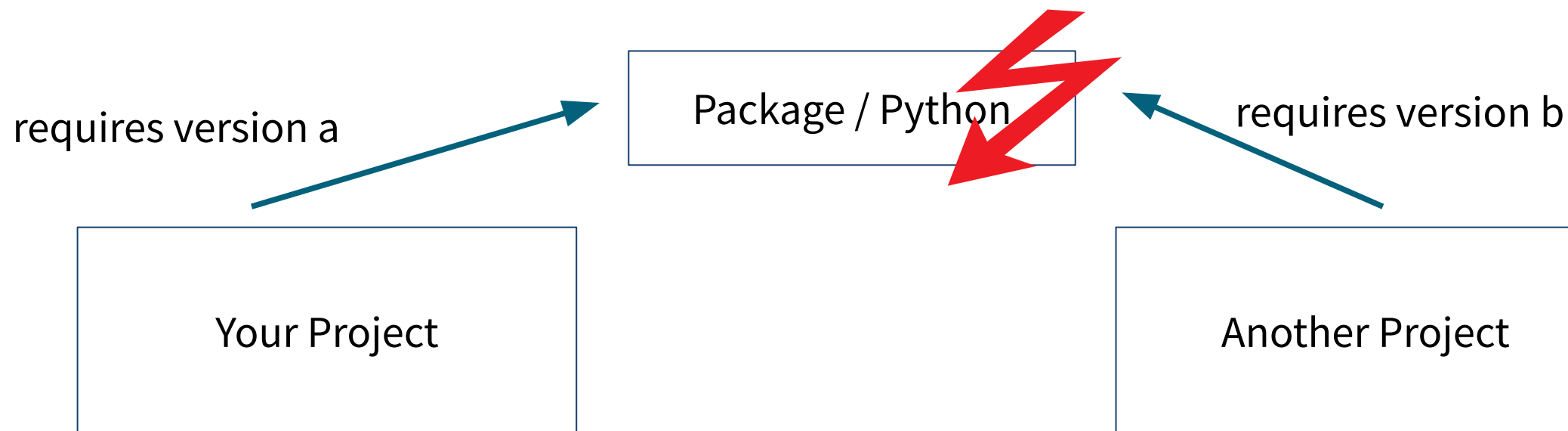
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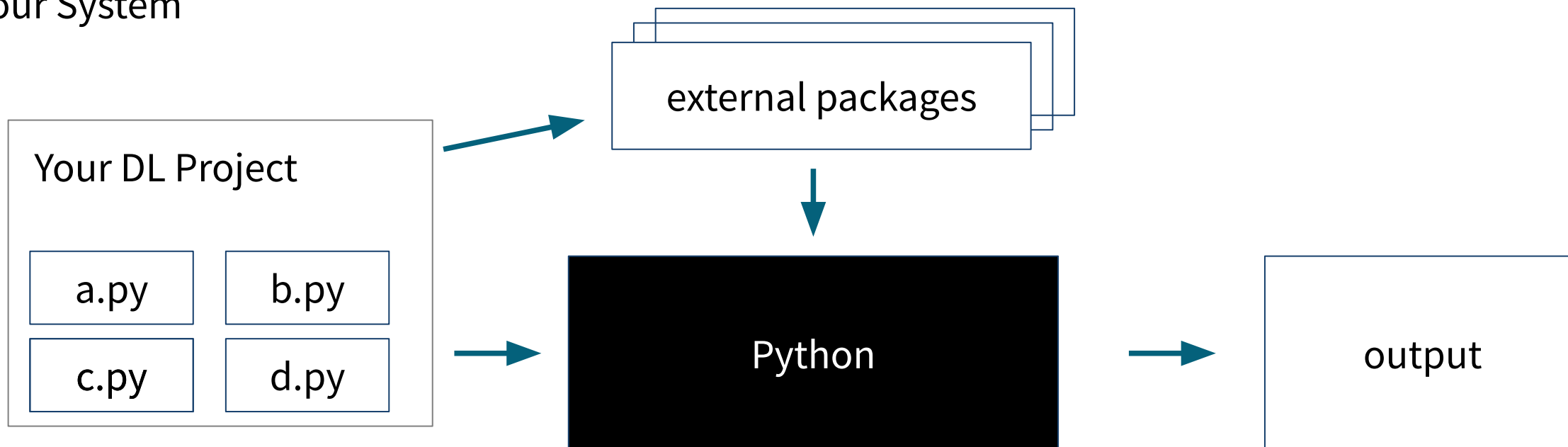


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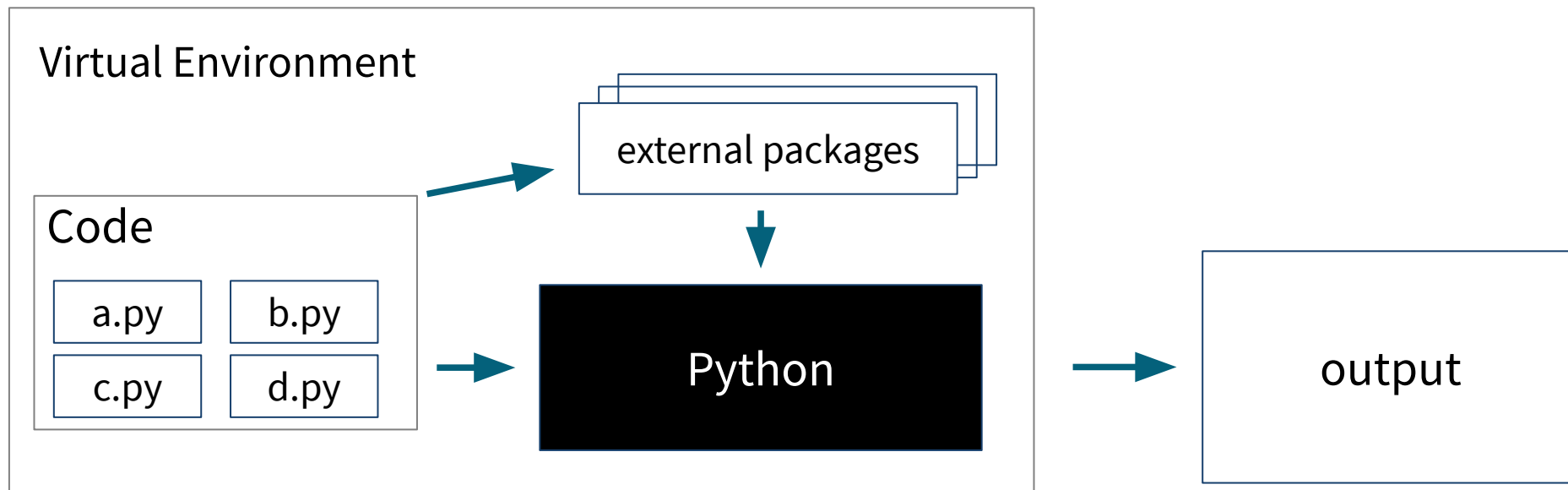


Virtual Environments

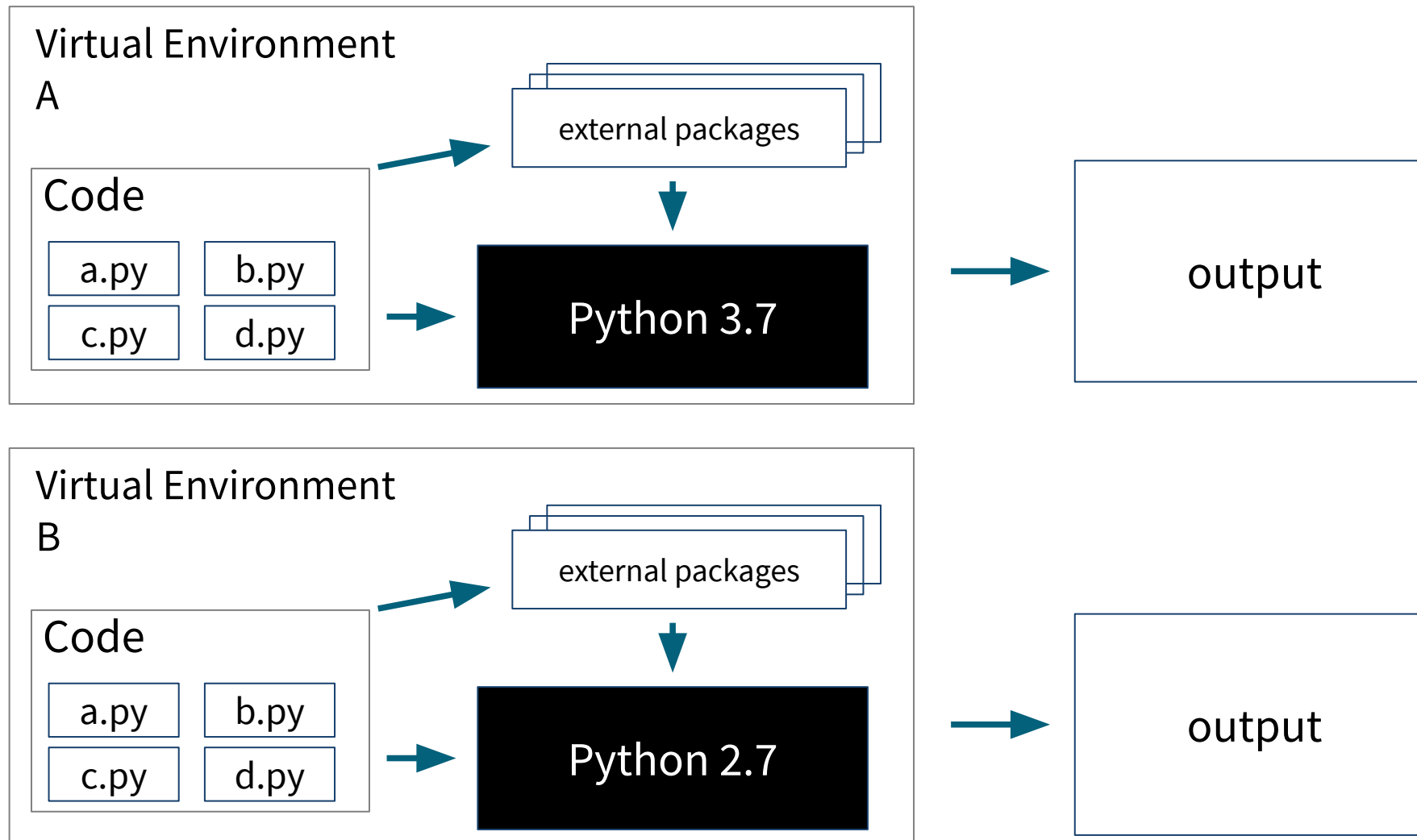
Your System



Your System



Your System





- Is Python and R distribution
- contains a
 - A Python interpreter
 - Package management tool (conda)
 - data science packages (TensorFlow etc)
- Available for Windows, MacOS, Linux
- Simplifies the Python setup process on Windows

Let's code!



Getting started on your computer



Setup Python on your PC

1. Install Python 3 and create a new folder for this project.
 - a. Linux: `sudo apt install python3`
 - b. Windows: download from python.org

How to create a new virtual environment:

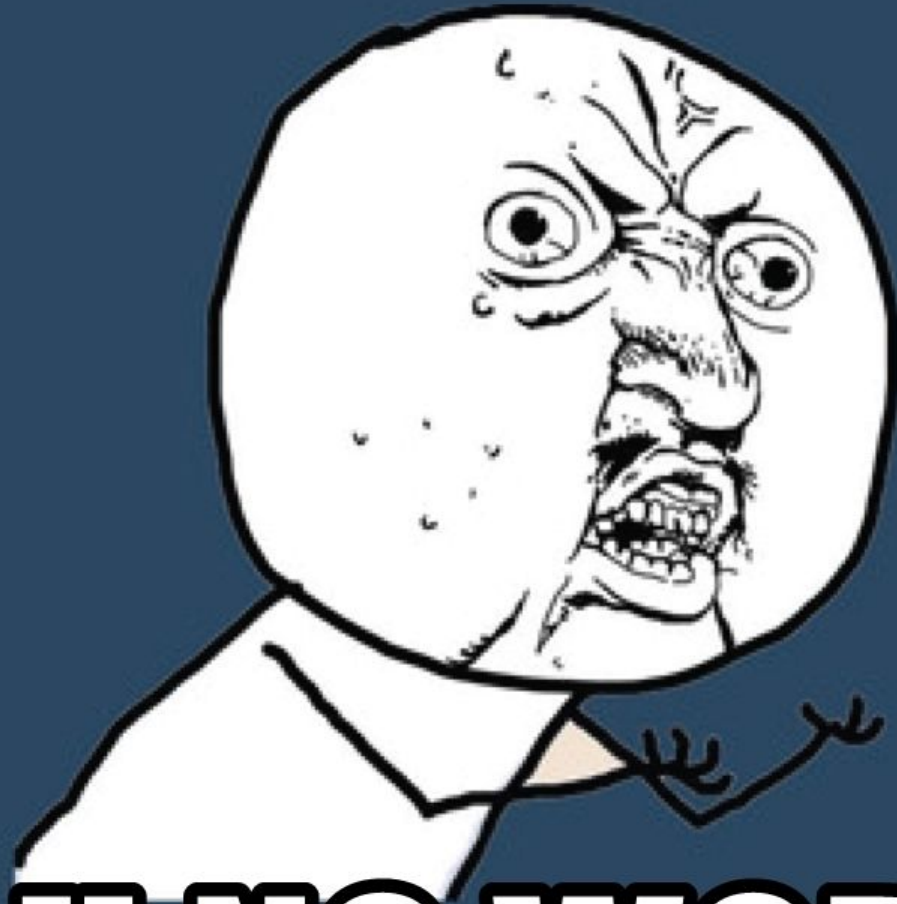
1. `python -m venv ./venv`
2. `source ./venv/bin/activate`
3. `pip install jupyter pandas`
4. `python -m jupyter notebook`

Colab



- Go to <https://colab.research.google.com>

PYTHON CODE



Y U NO WORK

