Choosing the Right Tools

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Overview

- pip and virtualenv are standard tools
- But the situation is changing
- Many different tools and projects
- Overview of current situation
- The future is uncertain

The Python Packaging Authority

is a working group that maintains many of the relevant projects in Python packaging.

https://pypa.io

Phases

Develop

Build a release

Distribute

Install

Execute

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Develop

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Execute

Installation

- **pip**
  - wheels
  - eggs
- **easy_install**
  - don't use

Development

- **Dependency management**
  - requirements.txt
- **Project isolation**
  - virtualenv
  - venv
- **New projects**
  - pipenv
  - poetry

Anaconda

https://www.anaconda.com

Python distribution

Package manager

Installer

Virtual environment tool

Installs non-Python packages too

Mostly aimed at Data Science

Requirements

requirements.txt

- **Standard (pip)**

- **Not deterministic**

Pipfile

- **pipenv**

- **Custom format**

- **Deterministic**

pyproject.toml

- **poetry**

- **Standard**
  (PEP-518)

- **Deterministic**

Demo

Pipenv

- Start a project

- Install dependencies

- Run code

Demo

Poetry

- Start a project
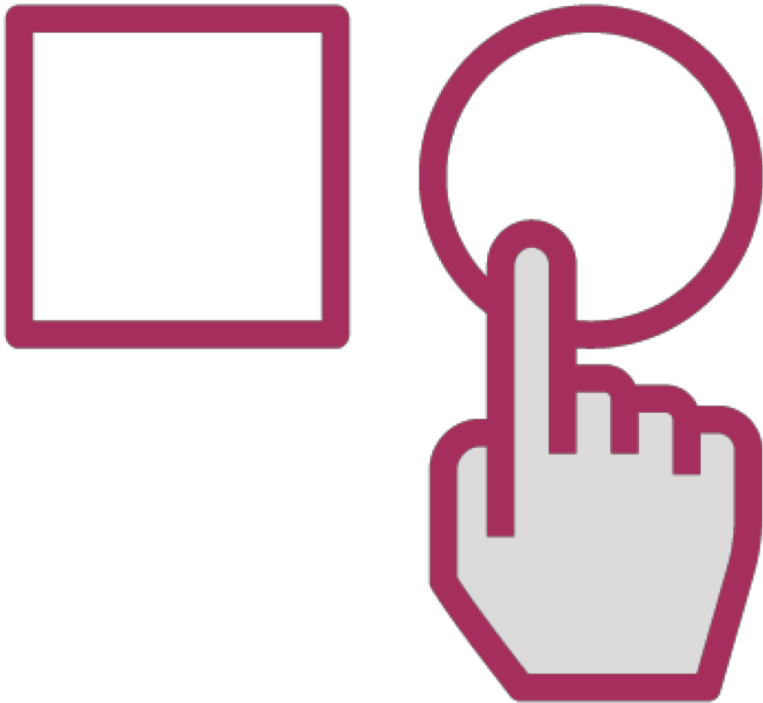
- Install dependencies

- Run code

Conclusion

"There should be one-- and preferably only one --obvious way to do it."

"Although that way may not be obvious at first unless you're Dutch."

The Zen of Python

Choosing Your Tools

The conservative/safe choice

– pip and virtualenv

User-friendly, cutting-edge

– pipenv (more popular)

– poetry (better UI, supports packaging)

Data Science

– Anaconda

Summary

Current situation

Many different approaches

The situation is changing

pip and virtualenv are standard tools

pipenv

poetry