



A fast package manager

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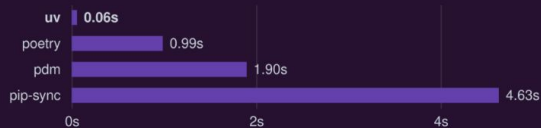
Outline / links / example:

[github.com/dbirks/indypy-uv](https://github.com/dbirks/indypy-uv)



# uv

An extremely fast Python package and project manager, written in Rust.



Installing *Trio*'s dependencies with a warm cache.

## Highlights

- 🔧 A single tool to replace `pip`, `pip-tools`, `pipx`, `poetry`, `pyenv`, `twine`, `virtualenv`, and more.
- ⚡ 10-100x faster than `pip`.
- 📁 Provides comprehensive project management, with a universal lockfile.
- ✳️ Runs scripts, with support for inline dependency metadata.
- 🐍 Installs and manages Python versions.
- 🔧 Runs and installs tools published as Python packages.
- 🔗 Includes a pip-compatible interface for a performance boost with a familiar CLI.
- 📁 Supports Cargo-style workspaces for scalable projects.
- 💾 Disk-space efficient, with a global cache for dependency deduplication.
- 📦 Installable without Rust or Python via `curl` or `pip`.
- 💻 Supports macOS, Linux, and Windows.

uv is backed by [Astral](#), the creators of [Ruff](#).

# What uv replaces

pip	uv pip
pip-compile	uv pip compile
pipx	uvx
poetry	uv
pyenv	uv python
twine	uv publish
virtualenv	uv venv

# Brief history

- Version 0.1.0 released February 2024
- Initially just ``uv pip``
- Then added project commands later

# Command comparisons

``python -m venv .venv` → `uv venv``

``pip install -r requirements.txt`  
→ `uv pip install -r requirements.txt``

``pip-compile requirements.in`  
→ `uv pip compile requirements.in > requirements.txt``

Demo of the pip-compile project

# Project commands

- ``uv venv``
- ``uv sync``
- ``uv run main.py`` to auto-create a venv and run sync
- ``uv add`` and ``uv remove``
- ``uv init``
- Demo of moving from requirements.txt to pyproject.toml

# Scripts with inline dependencies

- PEP 723
- ``uv run <script>``
- ``uv add --script <script>``
- ``uv sync --script <script>``
- Demo of running a script



# Docker

```
COPY --from=ghcr.io/astral-sh/uv:0.6.14 /uv /uvx /bin/
```

## Github Actions

```
- name: Setup uv
  uses: astral-sh/setup-uv@v5
  with:
    enable-cache: true
```

```
`brew install uv`
```

```
`winget install astral-sh.uv`
```

# Any questions?

Outline / links / example:

[github.com/dbirks/indypy-uv](https://github.com/dbirks/indypy-uv)