

### Installation

#### Linux & macOS

```
curl -LsSf https://astral.sh/uv/install.sh | sudo sh
```

#### Windows (PowerShell)

```
powershell -ExecutionPolicy Bypass -c "irm https://astral.sh/uv/install.ps1 | iex"
```

#### Homebrew (macOS)

```
brew install uv
```

#### Basic Commands

*Check Installed Version*

```
uv version
```

*Get Help*

```
uv help uv --help
```

#### Project Initialization

*Create a New Project*

```
uv init projec t-name # Basic project
```

### Project Management

```
uv init — initialize project (creates pyproject.toml, .venv)
```

```
uv add [pkg], --dev — add dependencies
```

```
uv lock, uv sync — lock & sync to universal uv.lock file
gist.github.com docs.astral.sh +3
horoscopo-astral.com +3 docs.astral.sh +3
docs.astral.sh +1 docs.astral.sh +1
```

### Virtual Environments

```
uv venv [--python X.Y] — create venv (downloads Python if missing)
```

```
uv python install ..., uv python pin X.Y — install and pin Python versions
```

### Script Support

Inline script metadata (`# /// script ...`) for dependencies & Python version

```
uv run --script ..., uv add --script ..., uv lock --script ... for isolated script execution
```

### Tool Execution

```
uvx <tool> ... — run tools in ephemeral envs
```

```
uv tool install <tool> — globally install tools like pipx
```

### pip-Compatible Interface

```
uv pip install, sync, compile, freeze, show, tree, etc. — speedier, pip-compatible
```

### Lockfiles

uv.lock (universal) captures exact package versions across platforms

.lock next to script for script-specific dependencies

### Extras & Utilities

```
uv self update, uv cache clean/prune, uv python dir, uv tool dir, shell completions
```

### Typical Workflow

```
uv init myproj # start project
uv add requests --dev # add dependencies
uv lock # generate uv.lock
uv sync # sync venv
uv run pytest # run tests in environment
uv tool install black # globally install tools
uv pip compile reqs.in # generate platform-independent reqs
uv pip sync reqs.txt # sync environments
```

**If you're migrating from a requirements.txt file**

```
# Add all dependencies from requirements.txt.
uv add -r requirements.txt -c constraints.txt
```

**Updating Dependencies To upgrade a package**

```
uv lock --upgrade-package requests
```



By Charles Duarte

[cheatography.com/charles-duarte/](https://cheatography.com/charles-duarte/)

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