

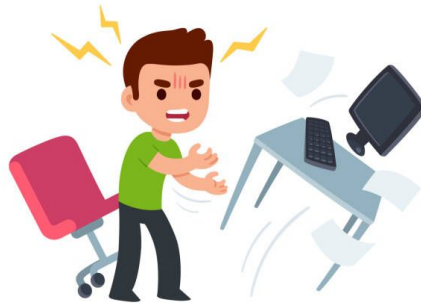


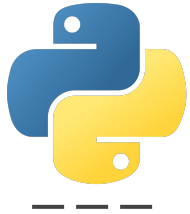
Dev Containers

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*Any views expressed are my own and do not necessarily represent those of my employer.

“It works on my machine!”





Python Dev Environment

Components of a dev environment:

- Python Versions
- Packages (pip/pipx)
- IDE Extensions
- Pre-Commit Hooks

All of which may be **different** between projects and workstations.

The Problem

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- “It works on my machine” issues.
- Inconsistent dependencies across the team.
- Manual setup & maintenance of environments.

Too many variables that will cause difficult to diagnose issues.

What Are Dev Containers?

Dev Container **noun**

An open specification for enriching containers with development specific content and settings.

Source: <https://containers.dev/>

Key Features

1. A Single Dependency
2. Consistent Environments
3. Automation
4. Portability
5. Collaboration
6. Extensibility

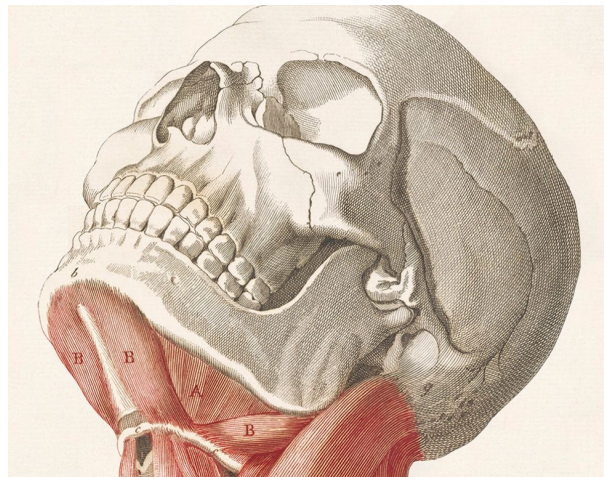




Anatomy of a Dev Container

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Anatomy of a Dev Container:

- Top-level `.devcontainer/` folder
- `devcontainer.json`
 - `image` or `dockerfile`
 - `features`
 - `post[Create,Start,Attach]Command`
 - `customizations`
 - `forwardPorts`
- Scripts, `DockerFile`, etc.



Features **noun**

Self-contained, shareable units of installation code and development container configuration.

Source: <https://containers.dev/implementors/features/>

Templates

- Over 40 core templates.
 - Ubuntu/Debian
 - Language-specific
 - + Postgres or MS SQL
 - And so much more.
- Many community images.



Deep Integration with VSCode



Dev Containers

Microsoft  microsoft.com |  26,832,431 installs |  (51) | Free

Open any folder or repository inside a Docker container and take advantage of Visual Studio Code's full feature set.

Installation

Launch VS Code Quick Open (Ctrl+P), paste the following command, and press enter.

```
ext install ms-vscode-remote.remote-containers
```

Copy

| [More Info](#)

Oh... and GitHub Codespaces

GitHub Codespaces

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Python Dev Container Example

<https://github.com/morey-tech/devcontainer-python-example>



Homelab Dev Container Example

<https://github.com/morey-tech/homelab>



Kubernetes Dev Container Example

<https://github.com/morey-tech/argocd-v2.12-examples>