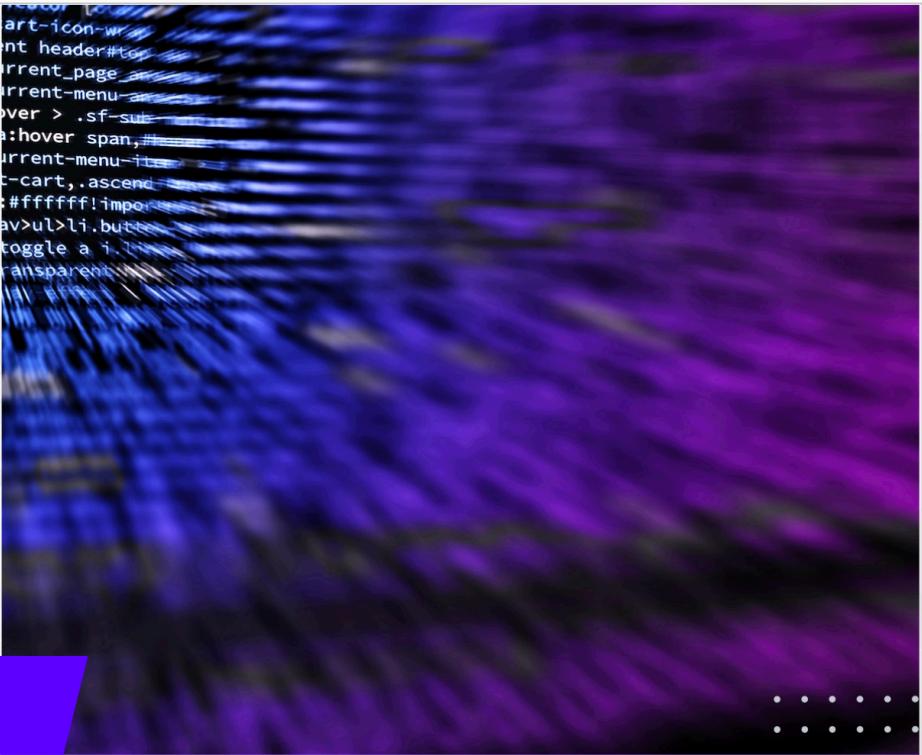


*remake*

# Tech Talks

16 SEPTEMBER 2025 / 7:00PM – 9:00PM



# Level Up Your Developer Onboarding with Dev Containers

*Sponsored by Remake Labs*

- Hired new Software Developer
- They have badge, new computer and login creds
- First assignment?



Photo by Aleksei Gorodenkov from Noun Project

# First assignment: Set Up Environment

## *Setup Environment*

- Assignment: Build their environment
- Clone Repo
- Configure laptop to run repo (hours, days or weeks?)

# How much time is needed?

*Days or Weeks?*

## Unicorn Project

Maxine Chambers — a senior developer —  
spent **two weeks just to set up her laptop.**

# Start simple

*Build the basics before scaling the complex*

## Typical Setup

- Brew
- NPM
- Postgres
- MongoDB

## Slidev

- Deno
- In-house binary executables
- (Manually compiled on only some OSes)
- Special Library dependencies

# Today

*Our experience together*

## Deno

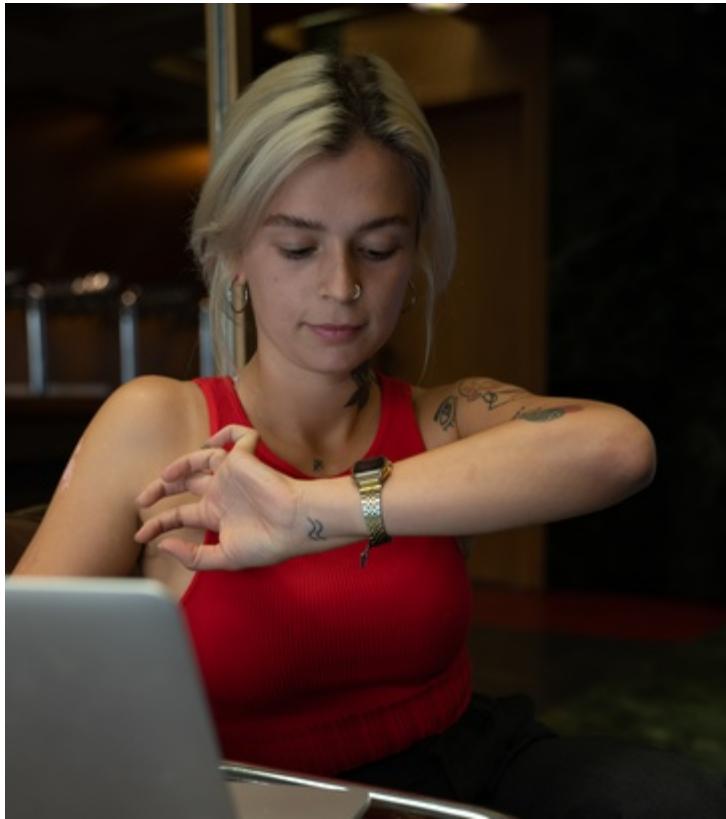
- Security: File, Network, Environment
- Default TypeScript (no tsconfig, ts-node, Babel)
- Dependency Model: Import from URLs
- Batteries Included (library, test runner, linter, formatter, bundler)
- Modern API design (ES Modules: Not CommonJS)

## Slidenv

- Write slides in Markdown
- Style with CSS
- Live coding components, interactivity
- Export to PDF, PNG, or host as a website

# How long to configure this environment?

*An hour? A day?*





▶ 0:00 / 0:40



Macintosh  
HD

Briefcase

# Hands-off Configuration

*Two files in Repo and extension*

```
$ ls .devcontainer  
devcontainer.json Dockerfile
```

- No Deno installed on my computer
- No Slidev installed on my computer
- VS Code Dev Containers

# .devcontainer/devcontainer.json

```
{  
  "name": "Slidev + Deno Dev Container",  
  "build": { "dockerfile": "Dockerfile", "context": ".." },  
  "forwardPorts": [3030],  
  "portsAttributes": {  
    "3030": { "label": "Slidev dev server", "onAutoForward": "notify" }  
  },  
  "customizations": {  
    "vscode": {  
      "extensions": [  
        "denoland.vscode-deno",  
        "Vue.volar",  
        "esbenp.prettier-vscode"  
      ],  
      "settings": {  
        ...  
      }  
    }  
  },  
  "remoteUser": "vscode",  
  "updateRemoteUserUID": true,  
  "postCreateCommand": "deno --version && slidev --version || true"  
}
```

# .devcontainer/Dockerfile

*Container blueprint*

```
FROM mcr.microsoft.com/devcontainers/base:jammy

# Install dependencies and Deno
USER root
RUN apt-get update && apt-get install -y --no-install-recommends \
...
...

# Switch to vscode before installing Deno to keep everything user-owned
USER vscode
ENV DENO_INSTALL=/home/vscode/.deno
...
RUN deno install -g -A npm:@slidev/cli && slidev --version || true

EXPOSE 3030
...
```

# Catch-up

*Plan for talk*

- Catch-up
  - Virtual Machines
  - Containers
- Dev Containers

# Virtual Machines

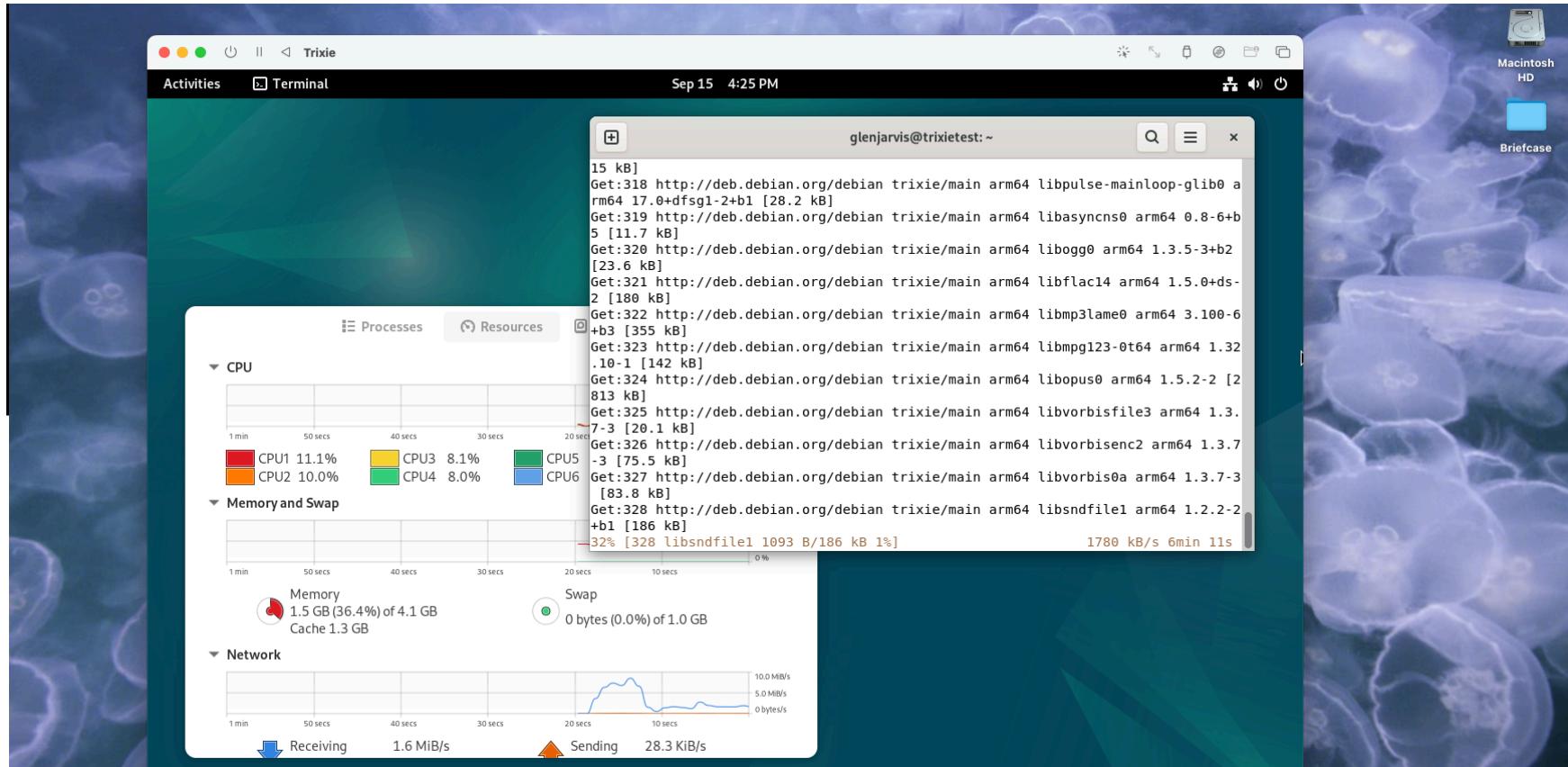
*A computer inside your computer*

- Simulate all the chips of a real computer
- Full guest OS running on top of host
- Heavy but flexible

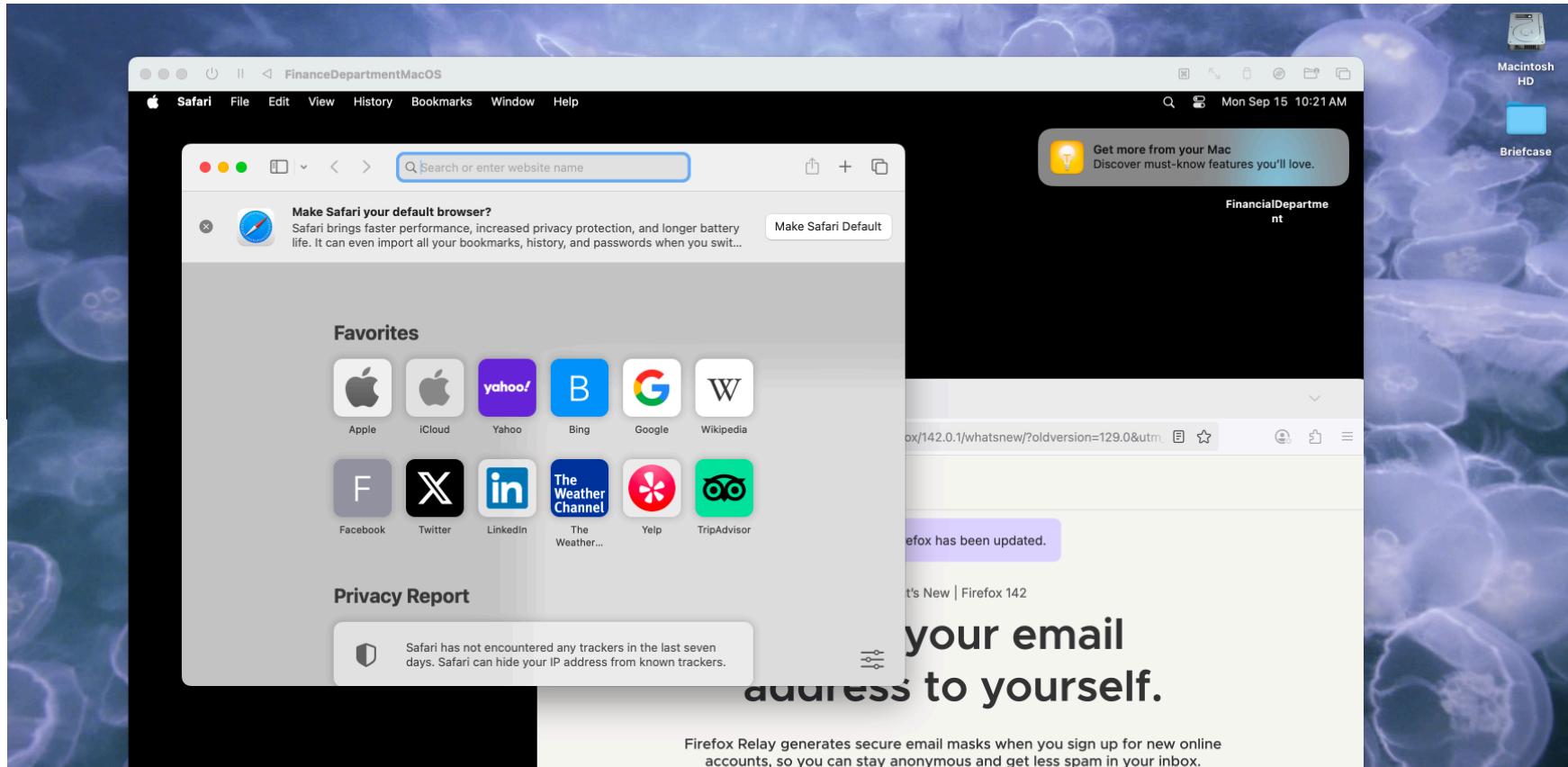
# Minecraft Computer



# My macOS Running Linux



# My Mac inside a Mac



# Benefits of Virtual Machine

*A computer in a computer*

- Isolation
- Flexibility
- Portability
- Testing & Experimentation
- Legacy Support

# Drawbacks of Virtual Machine

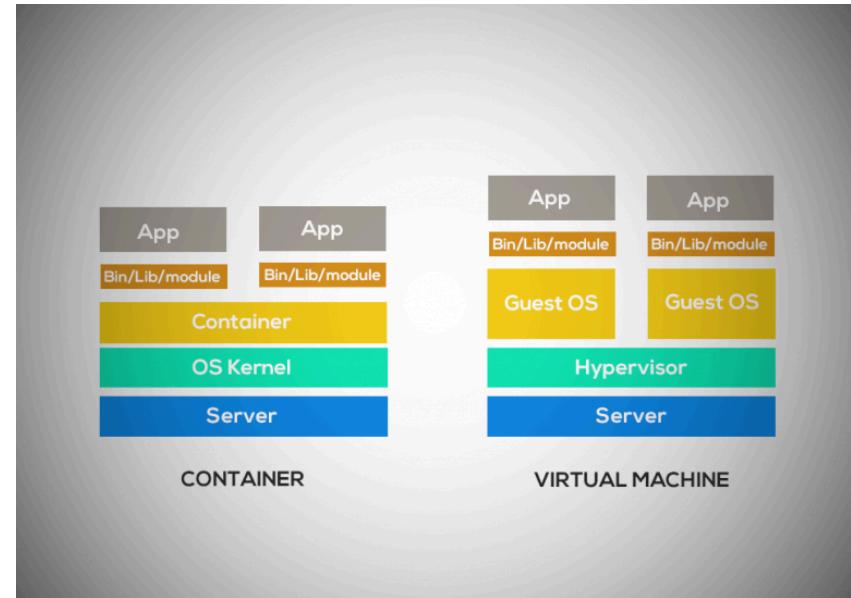
*A computer in a computer*

- Heavyweight
- Resource intensive
- Slow Boot & Performance

# Containers

*Tiny hard drives for a single program*

- Virtual Machine OS size: 15-30 GB
- Container size: 5-10 MB (Alpine)
- Busy Box container size: 1 MB
- Tens of thousands of container images: Single iPhone



# Containers

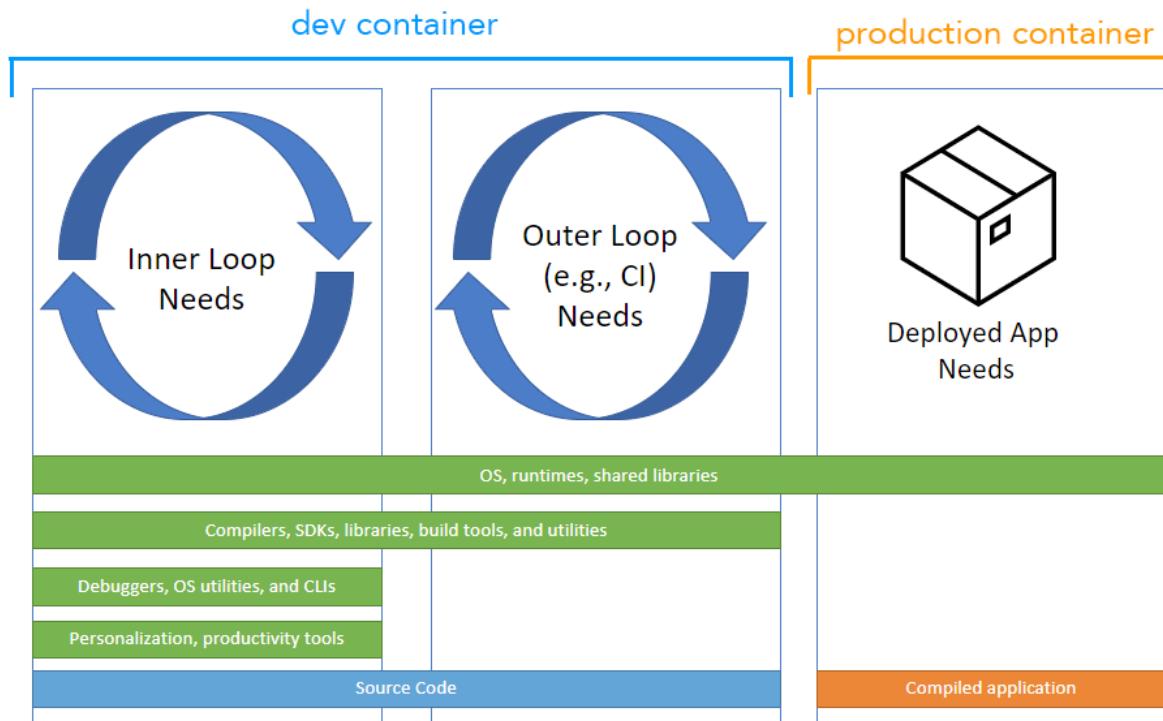
*Little Building Blocks*

- Containers are small
- Run one program
- Resource Control (Linux cgroups)
- Same benefits of Virtual Machines:
  - Isolation (Linux namespaces)
  - Flexibility
  - Portability
  - Testing & Experimentation
  - Legacy Support



# Dev Containers

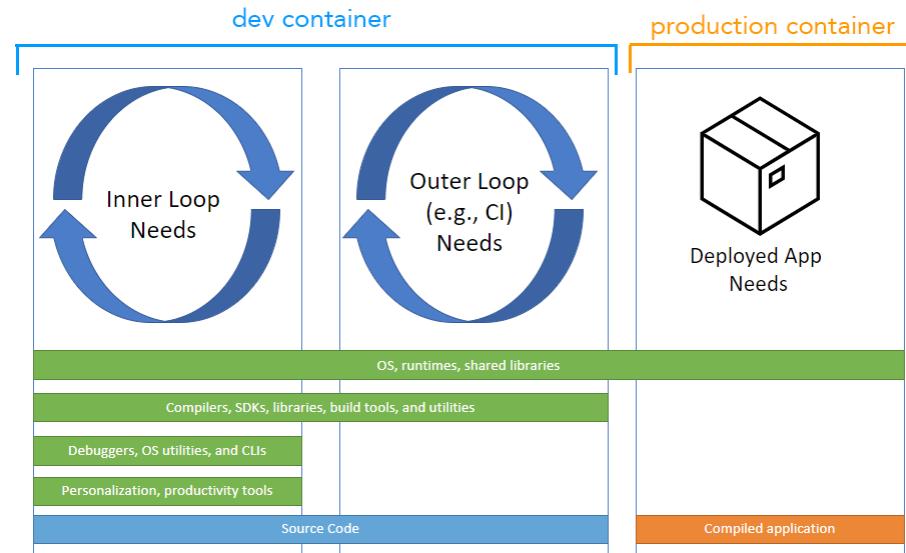
## A Deeper Dive



# Specifications

[containers.dev](https://containers.dev)

1. Metadata
2. Features
3. Templates



## Next Steps

- Start small
- Use existing templates/features
- Make .devcontainer/devcontainer.json file



# Works Cited

Page 1

"Developing inside a Container Using Visual Studio Code Remote Development." [Code.visualstudio.com, code.visualstudio.com/docs/devcontainers/containers](https://code.visualstudio.com/docs/devcontainers/containers).

"Development Container Specification." [Containers.dev](https://containers.dev/implementors/spec/), 2025, containers.dev/implementors/spec/. Accessed 30 Aug. 2025.

Microsoft. "Visual Studio Code." [Visualstudio.com](https://visualstudio.com/docs/devcontainers/tutorial), Microsoft, 3 Nov. 2021, code.visualstudio.com/docs/devcontainers/tutorial. Accessed 30 Aug. 2025.

Microsoft. "Visual Studio Code." [Visualstudio.com](https://visualstudio.com/docs/remote/tunnels#_open-a-folder-on-a-remote-tunnels-host-in-a-container), Microsoft, 3 Nov. 2021, code.visualstudio.com/docs/remote/tunnels#\_open-a-folder-on-a-remote-tunnels-host-in-a-container. Accessed 30 Aug. 2025.

"Development Containers." [Containers.dev](https://containers.dev/implementors/json_reference/), 2025, containers.dev. Accessed 30 Aug. 2025.

"Dev Container Metadata Reference." [Containers.dev](https://containers.dev/implementors/json_reference/), 2025, containers.dev/implementors/json\_reference/. Accessed 30 Aug. 2025.

# Works Cited

Page 2

"Dev Container Templates Distribution and Discovery." Containers.dev, 2025, containers.dev/implementors/templates-distribution/#distribution.

devcontainers. "GitHub - Devcontainers/Action: GitHub Action to Build & Publish Your Own Dev Container Assets." GitHub, 4 Oct. 2024, [github.com/devcontainers/action](https://github.com/devcontainers/action). Accessed 30 Aug. 2025.

devcontainers. "GitHub - Devcontainers/Spec: Development Containers: Use a Container as a Full-Featured Development Environment." GitHub, 2022, [github.com/devcontainers/spec](https://github.com/devcontainers/spec). Accessed 30 Aug. 2025.

devcontainers. "GitHub - Devcontainers/Template-Starter: A Template Explaining How to Author Custom Dev Container Templates." GitHub, 2022, [github.com/devcontainers/template-starter](https://github.com/devcontainers/template-starter). Accessed 30 Aug. 2025.

# Works Cited

Page 3

devcontainers. "Templates/Src/Docker-Outside-of-Docker at Main · Devcontainers/Templates." GitHub, 2022, [github.com/devcontainers/templates/tree/main/src/docker-outside-of-docker](https://github.com/devcontainers/templates/tree/main/src/docker-outside-of-docker). Accessed 30 Aug. 2025.

Microsoft. "Visual Studio Code." Visualstudio.com, Microsoft, 3 Nov. 2021, [code.visualstudio.com/docs/devcontainers/attach-container#\\_attached-container-configuration-reference](https://code.visualstudio.com/docs/devcontainers/attach-container#_attached-container-configuration-reference). Accessed 30 Aug. 2025.

Microsoft. "Visual Studio Code." Visualstudio.com, Microsoft, 3 Nov. 2021, [code.visualstudio.com/docs/devcontainers/containers](https://code.visualstudio.com/docs/devcontainers/containers). Accessed 30 Aug. 2025.

Microsoft. "Visual Studio Code." Visualstudio.com, Microsoft, 3 Nov. 2021, [code.visualstudio.com/docs/devcontainers/faq#\\_can-i-use-dev-containers-outside-of-vs-code](https://code.visualstudio.com/docs/devcontainers/faq#_can-i-use-dev-containers-outside-of-vs-code). Accessed 30 Aug. 2025.

# Works Cited

Page 4

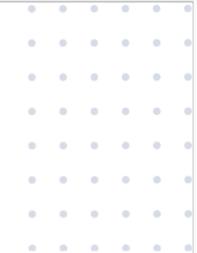
devcontainers. "GitHub - Devcontainers/Templates: Repository for Dev Container Templates That Are Managed by Dev Container Spec Maintainers. See <https://github.com/Devcontainers/Template-Starter> to Create Your Own!" GitHub, 2022, [github.com/devcontainers/templates](https://github.com/devcontainers/templates). Accessed 30 Aug. 2025.

Microsoft. "Visual Studio Code." Visualstudio.com, Microsoft, 3 Nov. 2021, [code.visualstudio.com/remote/advancedcontainers/develop-remote-host](https://code.visualstudio.com/remote/advancedcontainers/develop-remote-host). Accessed 30 Aug. 2025.

# GitHub

*github.com/glenjarvis*





# *remake*

**At Remake Labs**, we helped dozens of companies like Bitly, Motorola, Yotpo, Data.ai, LoanBuilder (now a PayPal company), and others find product-market fit as quickly and cheaply as possible. We work with your team to flesh out, validate, and shave months off the usual product process. We can manage the logistics, book experts and target customers for interviews, and design the new product alongside your team. We charge an affordable, flat fee based on the maturity of the desired solution.

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