

Intro to AlgoKit

A photograph of a dark landscape at night. In the foreground, the silhouette of a person stands on a rocky outcrop. The background is a vast, colorful sky filled with stars, transitioning from deep purple at the top to orange and yellow near the horizon.

setting up your Algorand development environment

Algorand™
FOUNDATION

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@ryanRfox



You are here.





#BUILD

Smart Contracts



#BUILD

dApps



#BUILD

DeFi



#BUILD

Games



#BUILD

Smart NFTs



#BUILD

Impact



#BUILD

Vibes



#BUILD

Randomness



#BUILD

Oracles



#BUILD

State Proofs



#BUILD

Bridges



#BUILD

Community



#BUILD

Web3 Future



#BUILD

Algorand



#AlgoFam

Algorand



@AlgoDevs
Algorand



How?

You 



templates + toolchain + web3 infrastructure



Auction



Crowdfunding



VRF Shuffle

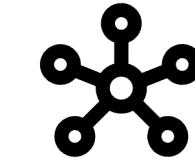
```

from beaker.application import Application
from beaker.decorators import Authorize, delete, external
from pyteal import Approve, Bytes, Concat, Expr, Global
from pyteal.ast import abi

class HelloWorld(Application):
    @external(read_only=True)
    def hello(self, name: abi.String, *, output: abi.String) -> Expr:
        return output.set(Concat(Bytes("Hello, "), name.get()))

    @delete(authorize=Authorize.only(Global.creator_address()))
    def delete(self) -> Expr:
        return Approve()

```



Network(s)



Wallet



APIs



Explorer



Show me!



Algokit Build Process

\$ algokit init

Select dApp template

Bootstrap toolchain

Compile source code

\$ algokit localnet start

\$ algokit localnet explore

Configure DevWallet

Deploy smart contract

Interact using Beaker Studio



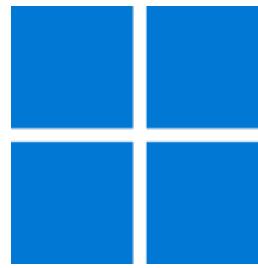
Prerequisites



\$ whoami



AlgoKit on Windows



Windows 11



Windows 10

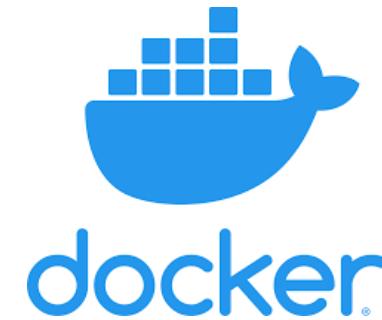
Build 19041+



Windows Prerequisites



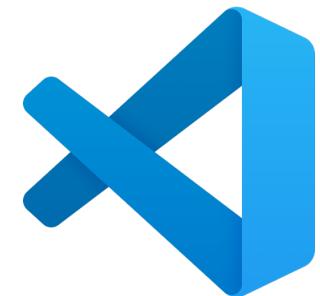
WSL2



4.8+



3.10+



VS Code

Required

Recommended



AlgoKit on macOS



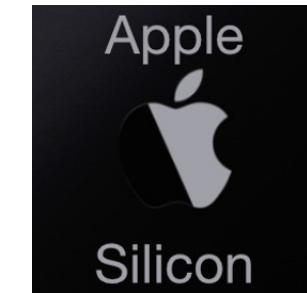
macOS Big Sur



macOS Monterey



macOS
Ventura



Apple
Silicon



intel
CORE

Support Versions

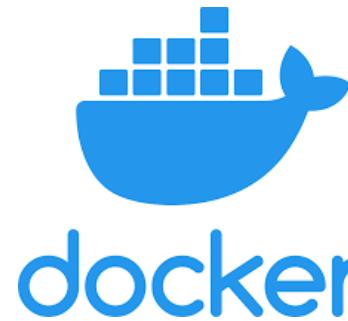
Supported Processors



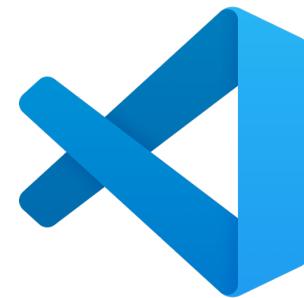
macOS Prerequisites



Homebrew



4.8+



VS Code



Chrome

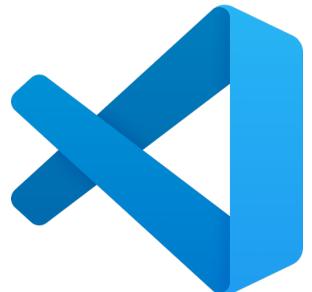
Required

Recommended



Dev Env Setup





VS Code



Code editing.
Redefined.

Free. Built on open source. Runs everywhere.

[Download Mac Universal](#)
Stable Build

Web, Insiders edition, or other platforms

By using VS Code, you agree to its license and privacy statement.

Version 1.76 is now available! Read about the new features and fixes from February.

EXTENSIONS: MARKETPLACE

- Python — 2019.6.24221 ⚡ 54.9M ★ 4.5
Linting, Debugging (multi-threaded...) Microsoft [Install](#)
- GitLens — Git supercharged 9.8.5 ⚡ 23.1M ★ 5 Supercharge the Git capabilities built into VS Code Eric Amadio [Install](#)
- C/C++ — 0.24.0 ⚡ 23M ★ 3.5 C/C++ IntelliSense, debugging, and tools Microsoft [Install](#)
- ESLint — 1.9.0 ⚡ 21.9M ★ 4.5 Integrates ESLint JavaScript linter into VS Code Dirk Baumer [Install](#)
- Debugger for Chrome — 4.11.6 ⚡ 20.6M ★ 4 Debug your JavaScript code in the browser Microsoft [Install](#)
- Language Support for Java — 0.47.0 ⚡ 18.6M ★ 4.5 Java Linting, Intellisense, formatting, and more Red Hat [Install](#)
- vscode-icons — 8.8.0 ⚡ 17.2M ★ 5 Icons for Visual Studio Code VSCode Icons Team [Install](#)
- Vetur — 0.21.1 ⚡ 17M ★ 4.5 Vue tooling for VS Code Pine Wu [Install](#)

blog-post.js — gatsby-graphql-app

```

src > components > JS blog-post.js > ↗function> [e]blogPost
1 import React from "react"
2 import Image from "gatsby-image"
3
4 export default ({ data }) => {
5   const blogPost = data.cms.blogPost
6   return (
7     [e]data
8     <div> [e]dateFormat
9       {blogPost [e]debug
10       blogPost [e]debugger
11       blogPost [e]decodeURI
12       <Image [e]decodeURIComponent
13       >)
14     <h1>{blogPost [e]defaultStatus
15     <div>Post [e]delete
16     <div dang [e]departFocus
17     </div>
18   )
19 }
20
21 export const query = graphql`
```

PROBLEMS TERMINAL ... 2: Task - develop

info : [wdm]: Compiling...
DONE Compiled successfully in 26ms 3:57:58 PM

info : [wdm]:
info : [wdm]: Compiled successfully.

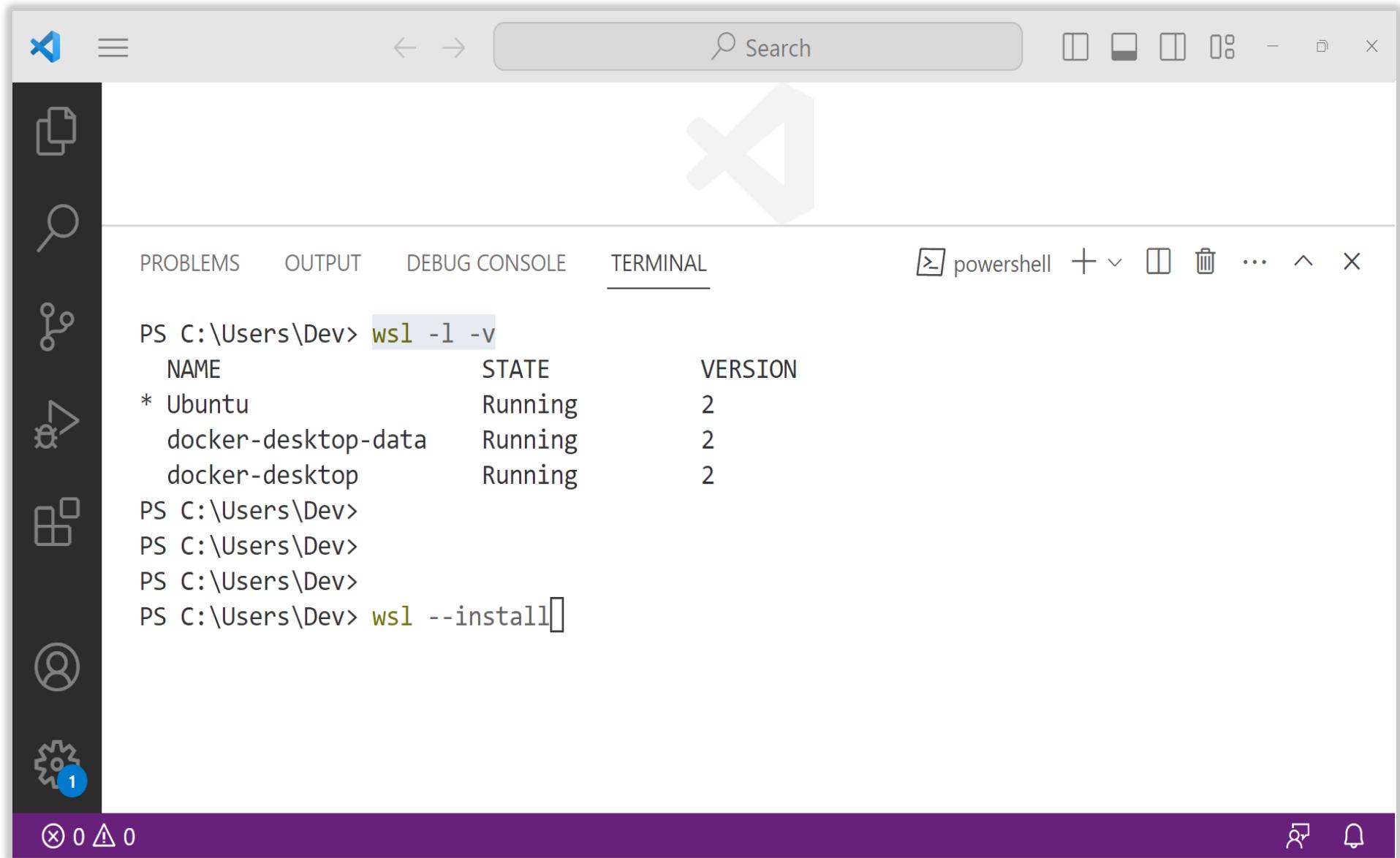
Ln 6, Col 21 Spaces: 2 UTF-8 LF JavaScript

IntelliSense Run and Debug Built-in Git Extensions

Visual Studio Code - Code Editor



WSL2



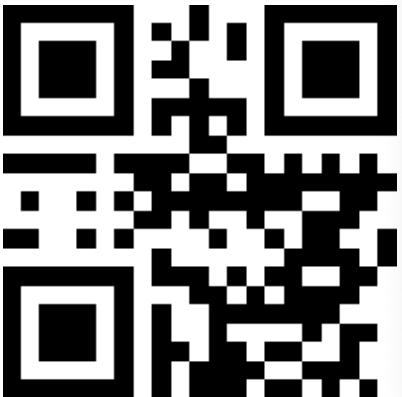
The screenshot shows the Visual Studio Code interface with the terminal tab selected. The terminal window displays the following command and its output:

```
PS C:\Users\Dev> wsl -l -v
NAME          STATE    VERSION
* Ubuntu       Running   2
  docker-desktop-data  Running   2
  docker-desktop      Running   2
PS C:\Users\Dev>
PS C:\Users\Dev>
PS C:\Users\Dev>
PS C:\Users\Dev> wsl --install[]
```

The terminal status bar at the bottom indicates 0 errors and 0 warnings. The left sidebar shows the standard VS Code icons for files, search, symbols, and more.



Homebrew



Homebrew — The Missing Package Manager for macOS (or Linux)

Fork me on GitHub

Search

English

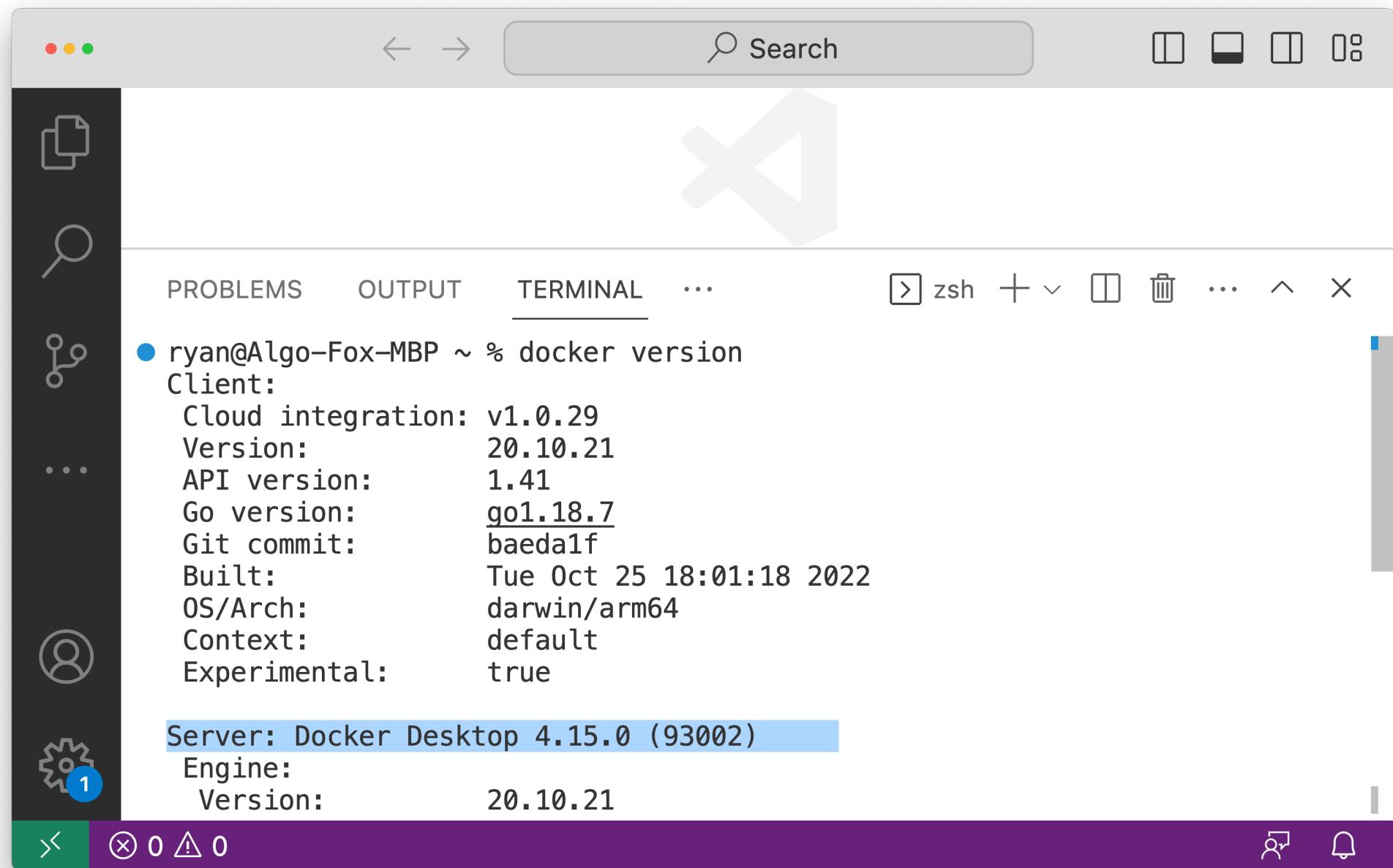
Install Homebrew

```
$ /bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
```

A screenshot of the Visual Studio Code (VS Code) interface. The title bar includes a search bar labeled "Search". The left sidebar has a dark theme with various icons: a file, a magnifying glass, a network, three dots, a user profile, and a gear with a "1" notification. The main area shows the "TERMINAL" tab selected. The terminal window displays the following text:

```
ryan@Algo-Fox-MBP ~ % git --version
git version 2.37.1 (Apple Git-137.1)
ryan@Algo-Fox-MBP ~ %
```

The bottom status bar shows a green "X" icon, a purple "0" icon, and a purple "0" icon with a warning symbol. On the far right of the status bar are icons for a profile, a square, and a bell.



The screenshot shows the Visual Studio Code interface with the Docker extension installed. The sidebar on the left has icons for file, search, connections, and other settings, with a gear icon having a '1' notification. The main area shows a terminal window with the following output:

```
ryan@Algo-Fox-MBP ~ % docker version
Client:
  Cloud integration: v1.0.29
  Version:          20.10.21
  API version:      1.41
  Go version:       go1.18.7
  Git commit:       baeda1f
  Built:            Tue Oct 25 18:01:18 2022
  OS/Arch:          darwin/arm64
  Context:          default
  Experimental:    true

Server: Docker Desktop 4.15.0 (93002)
Engine:
  Version:          20.10.21
```

The 'Server' section is highlighted with a blue background. The bottom status bar shows a green 'X' button, a purple '0' with a gear icon, and a purple '0' with a warning icon.



A screenshot of the Visual Studio Code (VS Code) interface. The window title bar shows "Search". The left sidebar has icons for file, search, and other settings, with a gear icon having a blue circle containing the number "1" indicating an update. The main area is the Terminal tab, which is active. The terminal output shows:

```
ryan@Algo-Fox-MBP ~ % python --version
Python 3.10.7
ryan@Algo-Fox-MBP ~ %
```

The bottom status bar shows "x" (close), "✖ 0 ⚠ 0" (problems and warnings count), and icons for refresh and notifications.



pipX

A large, bold, black "pip" text is partially obscured by a thick, green brushstroke "X".

A screenshot of the Visual Studio Code interface. The title bar shows "Search". The left sidebar has icons for剪切 (Scissors), 搜索 (Search), 共享 (Share), and three dots. The bottom left of the sidebar shows a gear icon with a blue circle containing the number 1. The main area is the Terminal tab, which is active. The output shows:

```
ryan@Algo-Fox-MBP ~ % pipx --version
1.2.0
ryan@Algo-Fox-MBP ~ % █
```

The bottom status bar shows "X" (red), "0" (green), and "0" (yellow).

AlgoKit Installation





```
ryan@Algo-Fox-MBP ~ % brew install algorandfoundation/tap/algokit
==> Downloading https://github.com/algorandfoundation/algokit-cli/releases/download/v0.3.3/a
==> Downloading from https://objects.githubusercontent.com/github-production-release-asset-2
#####
All formula dependencies satisfied.
==> Installing Cask algokit
==> Running installer script 'pipx'
    installed package algokit 0.3.3, installed using Python 3.11.2
    These apps are now globally available
        - algokit
==> Running installer script 'pipx'
/Users/ryan/.local/bin has been added to PATH, but you need to open a new
terminal or re-login for this PATH change to take effect.

You will need to open a new terminal or re-login for the PATH changes to take
effect.

Otherwise pipx is ready to go! ✨ ✨ ✨
==> Running installer script 'bash'
🍺 algokit was successfully installed!
```



A screenshot of the Visual Studio Code (VS Code) interface, specifically focusing on the Terminal tab. The terminal window shows the output of a command-line session:

```
ryan@Algo-Fox-MBP ~ % pipx install algokit
installed package algokit 0.3.3, installed using Python 3.11.2
These apps are now globally available
  - algokit
done! ✨ ✨ ✨
ryan@Algo-Fox-MBP ~ %
```

The terminal interface includes a sidebar with icons for Problems, Output, Terminal, and other development tools. The status bar at the bottom shows file counts (0 files, 0 errors).

Let's
#BUIDL



ONLINE MATERIALS

Hack Shack

<https://github.com/algorand-devre/hackhouse/>

<https://developer.algorand.org>

<https://discord.gg/algorand>

