

Walking with 

Robius :

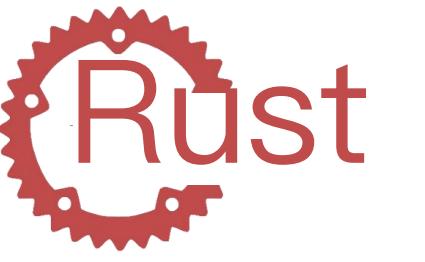
纯 Rust 跨平台 App 开发框架

张汉东

2025.01.18

Rust Meetup

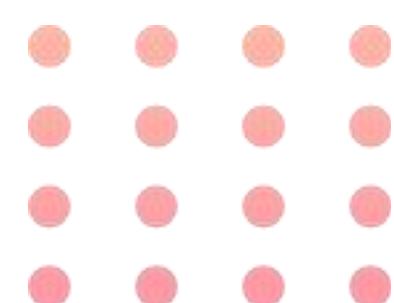


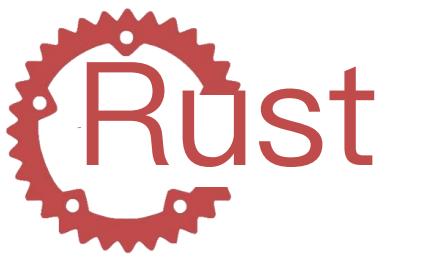


分享大纲

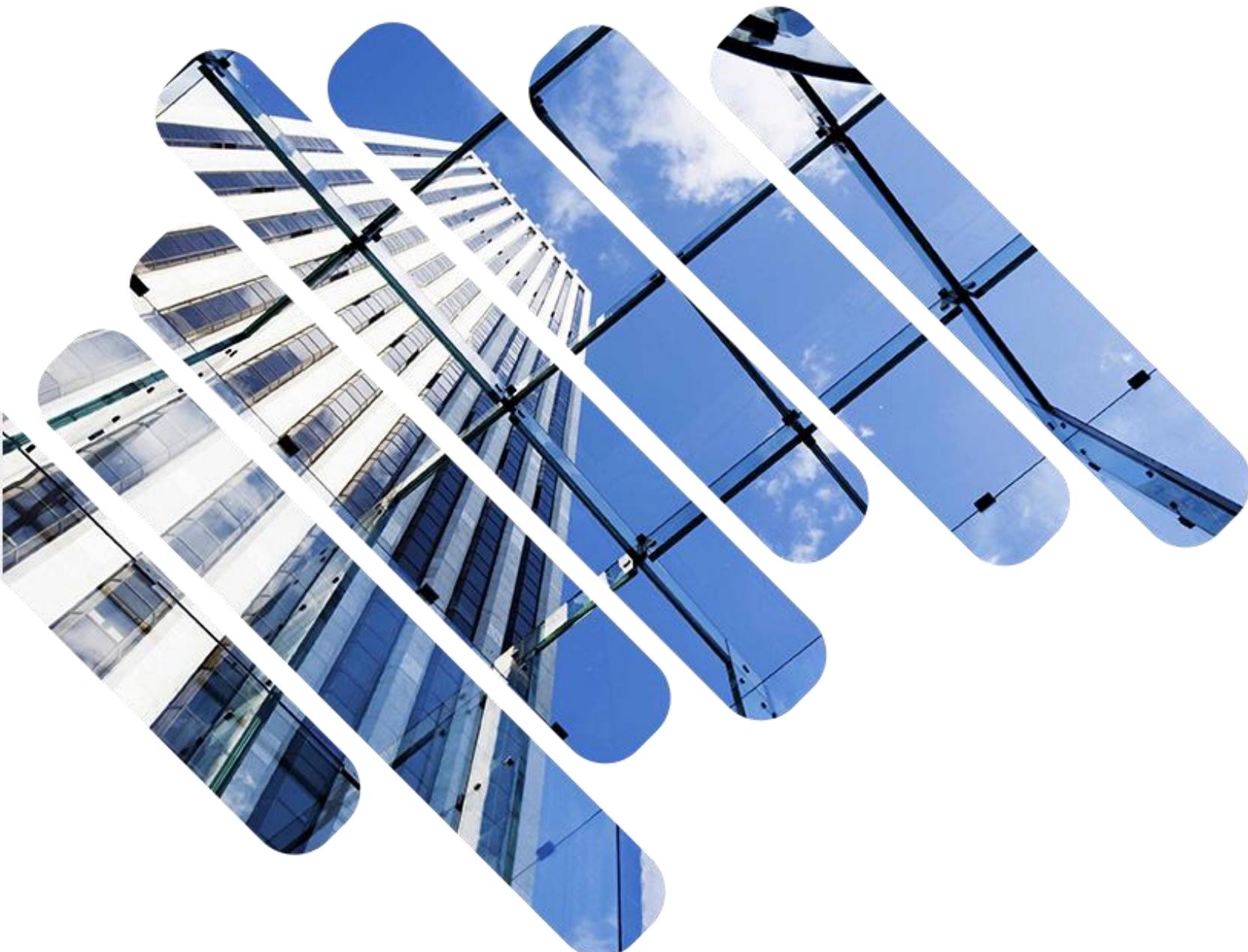


- 自我介绍
- Robius 是什么
- Robius 旗舰应用
- Robius 生态建设
- Robius 2025 展望





自我介绍



- 独立咨询师

先后为华为、中兴、中泰证券、理想汽车、平安科技等公司提供咨询服务。

- Rust 开源项目核心贡献者

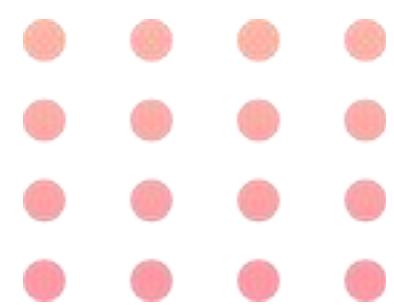
纯 Rust 跨平台开发框架 Robius

- Rustcc 中文社区 和 RustChinaConf 的联合发起人

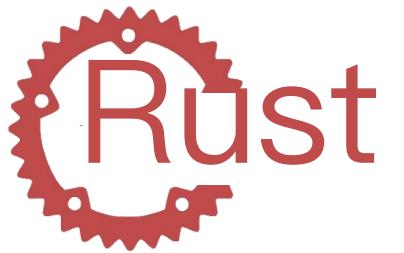
从 2020 年开始参与组织 RustChinaConf，已经连续四年了。

- 技术作者

《Rust 编程之道》作者，公众号《觉学社》



自我介绍 - 2025 新身份



● Rust 中国公益训练营总负责人

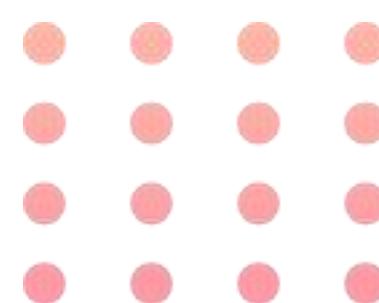
为训练营的 Rust 爱好者们提供良好的学习体验

● Rust 基金会

Rust 基金会官方组织

● 清华大学开源系统训练营

国内领先且享誉盛名的开源 OS 训练营



初衷与愿景:

推动 Rust 在中国的发展，并且为广大学子和 Rust 爱好者们与招募 Rust 开发者的企业提供一个产研学的基础桥梁

● Rustcc 中文社区

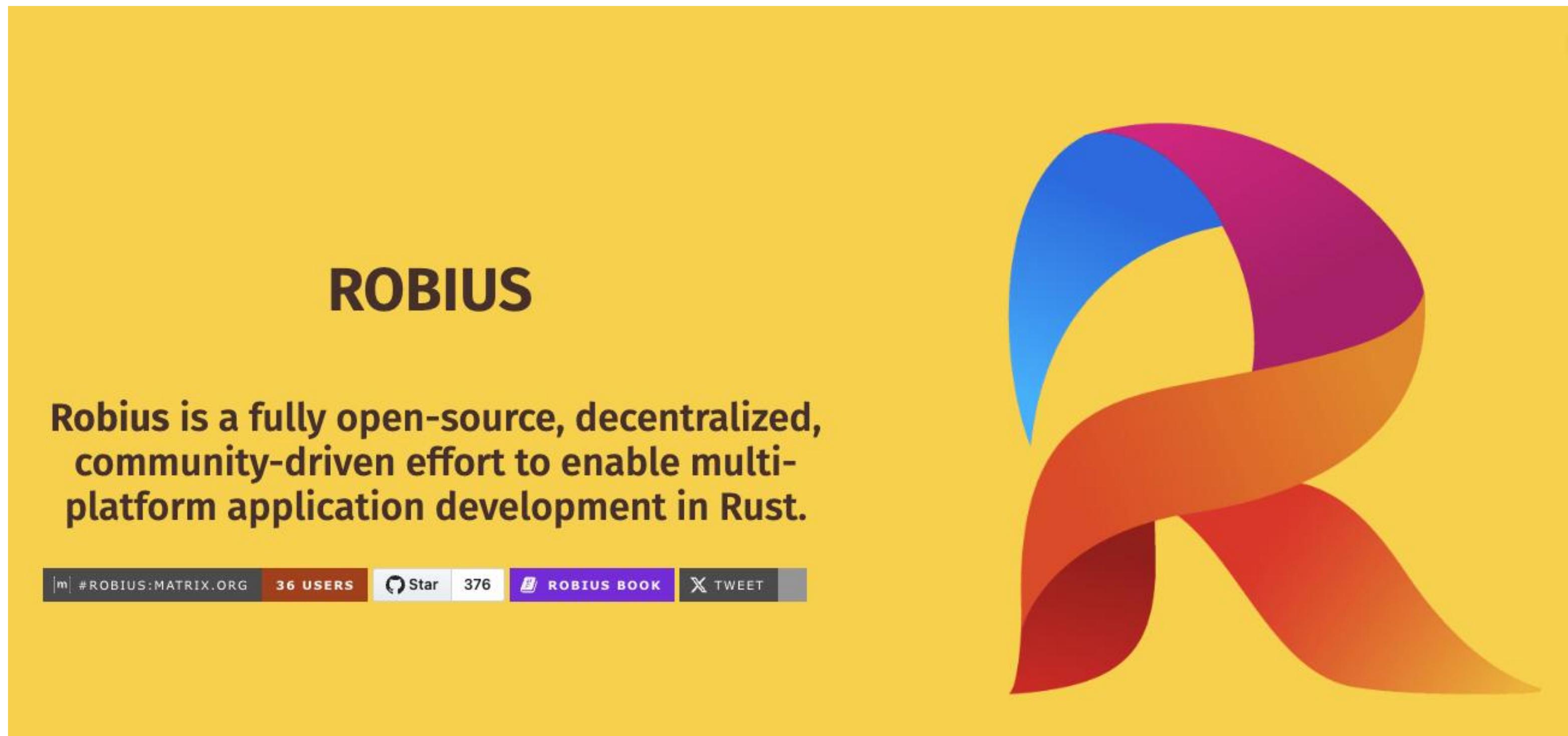
世界第三大 Rust 社区

● SecondState 公司

业界领先的云原生高性能边缘计算服务 WasmEdge

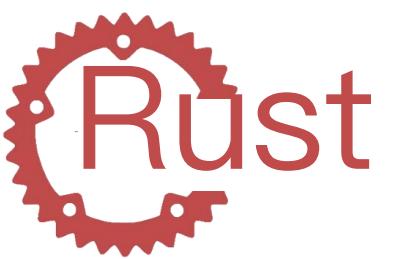
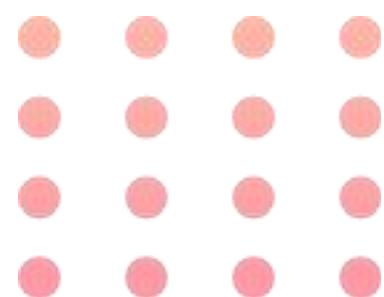


Robius 是什么



- 完全开源
- 去中心化
- 社区驱动
- 开发跨平台 App
- 纯 Rust 实现

Robius 这个名字来源于拉丁语单词 *robius*, 意为红色, 如牛、麦子、锈等。
Robius 与 Mobius 押韵, 我们的标志/图标灵感来自“Rust”和“Mobius strip”这个文字游戏的组合。
我们使用美式发音, 发长音“o”: “Roe-bee-us” / 'roʊ'bɪəs。

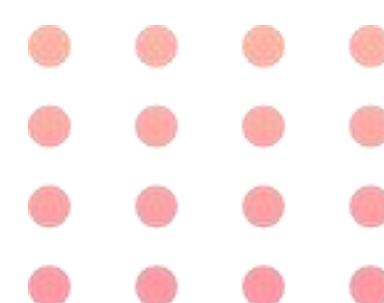


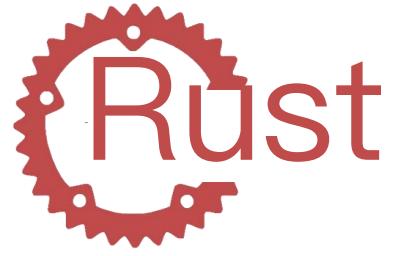


Robius 是什么



- 在架构设计层面，Robius采用了高度模块化的方式。
提高了框架的灵活性，开发者可以根据实际需求组合不同的功能组件
- 在开发模式层面，Robius不是由单一团队或公司主导的项目。
降低了项目的技术风险，不会因为某个核心组件的问题影响整个应用开发
- 在技术选择层面，Robius对底层实现保持开放态度。
促进了社区创新，不同团队可以基于各自的专长贡献解决方案
- 在社区建设层面，Robius积极促进跨组织的技术交流与协作。
加速了生态发展，通过开放协作模式吸引更多开发者参与





Robius 是什么

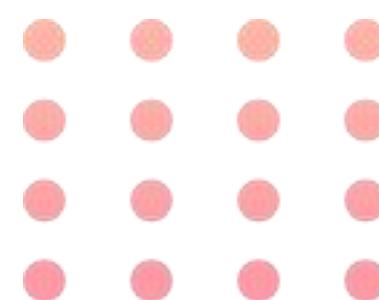


- 核心部件：平台抽象

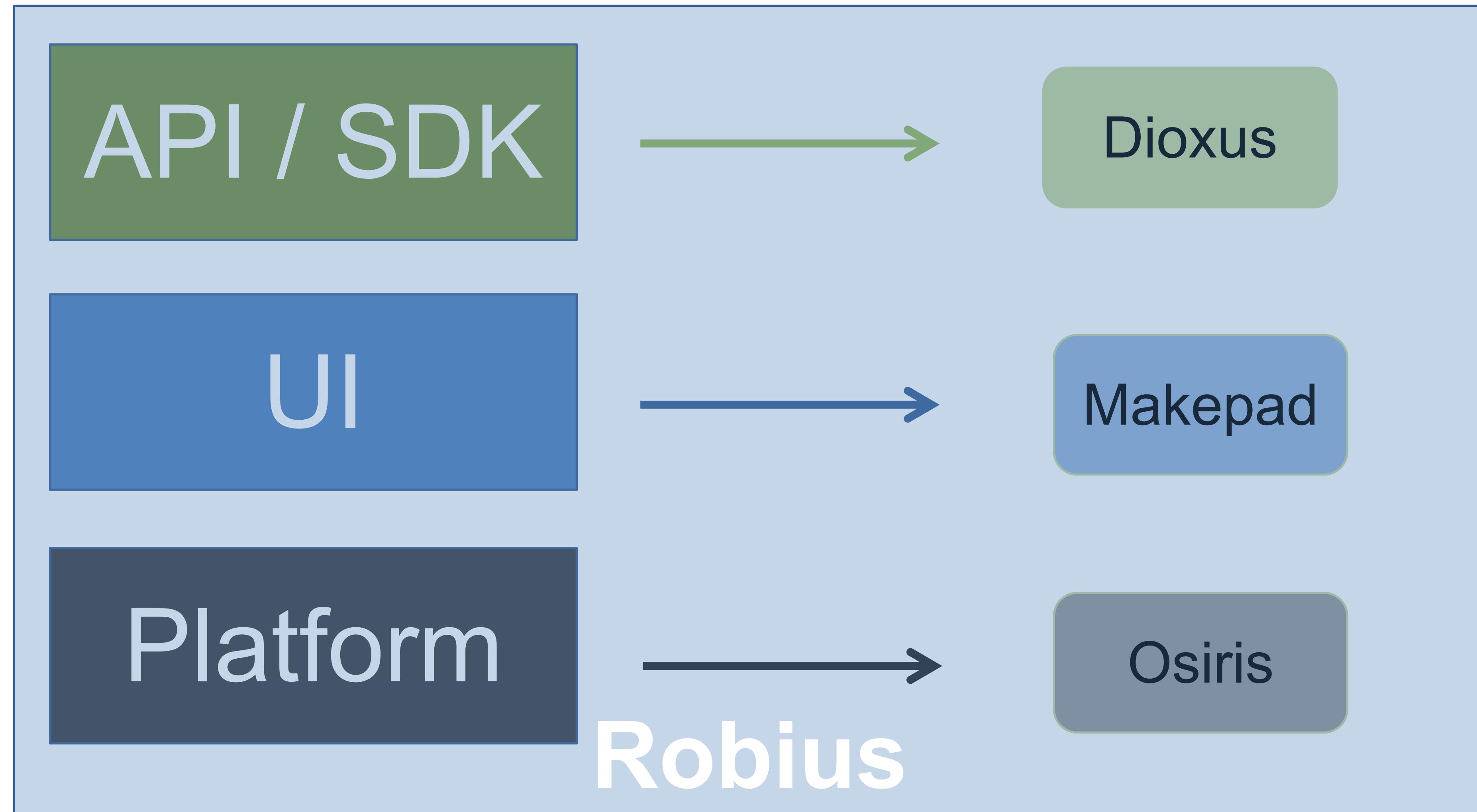
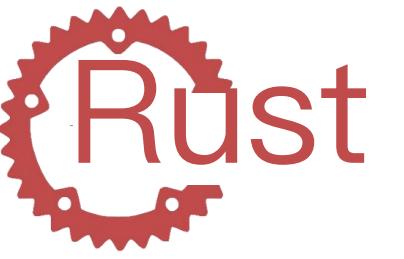
- robius-location: 地理位置服务
- robius-authentication: 生物识别/密码认证
- robius-open: URI和文件处理
- robius-directories: 标准目录访问
- robius-keychain: 安全数据存储
- robius-url-handler: 注册 rust app 为 URL scheme 或 file association
- robius-dialog: 原生对话框(WIP)

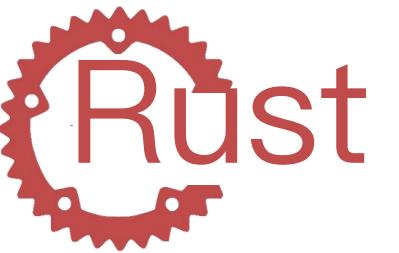
- 底层基础设施

- android-build: Android 构建支持
- robius-android-env: Android 环境抽象



Robius 是什么





Robius 旗舰应用

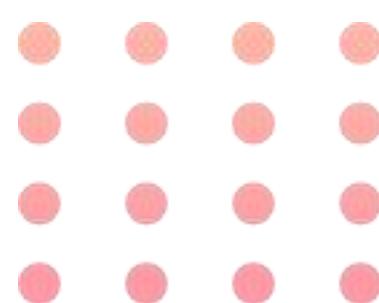


- Moly: 一个本地 LLM 聊天运行时和 AI 代理探索器（之前称为 "Moxin"）

技术栈: *Robius + Makepad + LlamaEdge* (基于 *WasmEdge*)

- Robrix: 一个为高级用户设计的 Matrix 聊天客户端

技术栈: *Robius + Makepad*



Robius 旗舰应用



● Moly



Discover, download, and run local LLMs

Search Model by Keyword

Featured Agents

Reasoner
localhost:8000
An agent that will help you find good questions about any topic

Models

Mistral-Nemo-Instruct-2407-GGUF

Model Size Requires Architecture

Model Summary Resources

[View All](#)

[second-state](#) [Hugging Face](#)

Show All Files (13) Only Recommended Files (0)

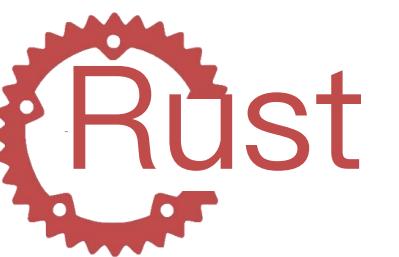
Model Downloads 0 downloading 0 paused



Robius 旗舰应用



● Moly



The screenshot shows the Robius application interface. On the left is a sidebar with icons for Discover (selected), Chat, My Models, and Settings. The main area has a search bar at the top. Below it is a 'Model Summary' section with a 'View All' button and a 'SHOW' dropdown set to 'All Files (13)'. A table lists two files: 'Mistral-Nemo-Instruct-2407-Q2_K.gguf' (4.46 GB) and 'Mistral-Nemo-Instruct-2407-Q3_K_L.gguf' (6.11 GB). The first file is currently being downloaded, indicated by a progress bar at 0.5% and a 'Download' button. The 'Resources' section includes links to 'second-state' and 'Hugging Face'. At the bottom, a 'Model Downloads' section shows the active download of 'Mistral-Nemo-Instruct-2407-Q2_K.gguf'.

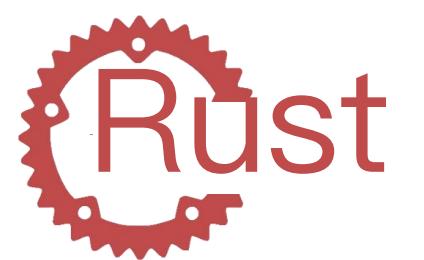
File name	Full Size	Quantization
Mistral-Nemo-Instruct-2407-Q2_K.gguf	4.46 GB	[checkbox]
Mistral-Nemo-Instruct-2407-Q3_K_L.gguf	6.11 GB	[checkbox]

Model Downloads: 1 downloading, 0 paused

Mistral-Nemo-Instruct-2407-Q2_K.gguf
Downloading 0.5%
22 MB / 4.46 GB



Robius 旗舰应用



The screenshot shows the Robius application interface. On the left is a sidebar with icons for Discover, Chat, My Models, and Settings. The main area has a search bar at the top with the query "mistral". Below it, a message says "2 Results for 'mistral'".

The first result is "Mistral-Nemo-Instruct-2407-GGUF". It includes a summary table with columns for File name, Full Size, Quantization, and Download button. The table lists five files: "Mistral-Nemo-Instruct-2407-Q2_K.gguf" (4.46 GB), "Mistral-Nemo-Instruct-2407-Q3_K_L.gguf" (6.11 GB), "Mistral-Nemo-Instruct-2407-Q3_K_M.gguf" (5.67 GB), "Mistral-Nemo-Instruct-2407-Q3_K_S.gguf" (5.15 GB), and "Mistral-Nemo-Instruct-2407-Q4_0.gguf" (6.59 GB).

At the bottom of the main area, there are buttons for Model Downloads, 0 downloading, and 0 paused.

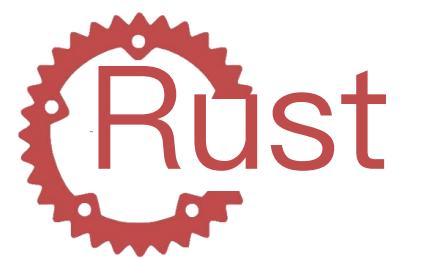
File name	Full Size	Quantization	Download
Mistral-Nemo-Instruct-2407-Q2_K.gguf	4.46 GB	<input type="checkbox"/>	Download
Mistral-Nemo-Instruct-2407-Q3_K_L.gguf	6.11 GB	<input type="checkbox"/>	Download
Mistral-Nemo-Instruct-2407-Q3_K_M.gguf	5.67 GB	<input type="checkbox"/>	Download
Mistral-Nemo-Instruct-2407-Q3_K_S.gguf	5.15 GB	<input type="checkbox"/>	Download
Mistral-Nemo-Instruct-2407-Q4_0.gguf	6.59 GB	<input type="checkbox"/>	Download



Robius 旗舰应用

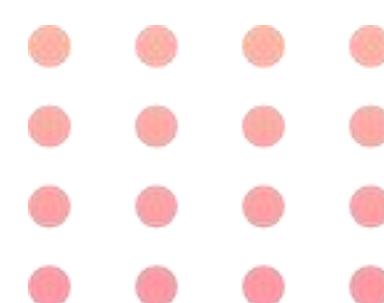


Moly



The screenshot shows the Moly application interface. On the left is a sidebar with icons for Discover, Chat, My Models, and Settings. The main area is titled "Models" and displays a list of AI models. One model, "Mistral-Nemo-Instruct-2407-GGUF", is highlighted. The interface includes a search bar, a sort dropdown menu set to "Most Likes", and sections for Model Summary and Resources. A download table lists five files with their sizes and download buttons. At the bottom, it shows "Model Downloads" with 0 downloading and 0 paused.

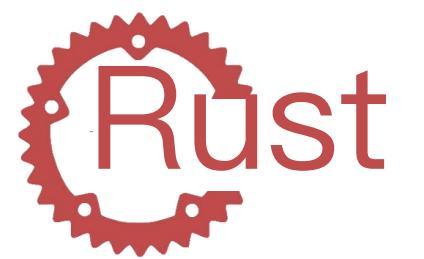
File name	Full Size	Quantization	Action
Mistral-Nemo-Instruct-2407-Q2_K.gguf	4.46 GB	<input type="checkbox"/>	<button>Download</button>
Mistral-Nemo-Instruct-2407-Q3_K_L.gguf	6.11 GB	<input type="checkbox"/>	<button>Download</button>
Mistral-Nemo-Instruct-2407-Q3_K_M.gguf	5.67 GB	<input type="checkbox"/>	<button>Download</button>
Mistral-Nemo-Instruct-2407-Q3_K_S.gguf	5.15 GB	<input type="checkbox"/>	<button>Download</button>
Mistral-Nemo-Instruct-2407-Q4_0.gguf	6.59 GB	<input type="checkbox"/>	<button>Download</button>



Robius 旗舰应用

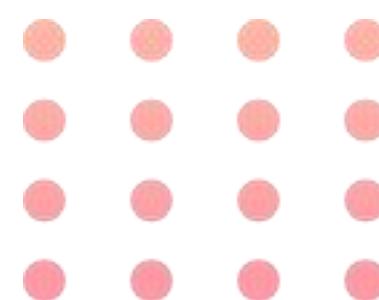


Moly



The screenshot shows the 'My Models' section of the Moly application. On the left, there is a sidebar with icons for 'Discover', 'Chat', 'My Models' (which is selected and highlighted in blue), and 'Settings'. The main area has a title 'My Models' followed by '2 Models, 8.30 GB Diskspace'. Below this is a table with two rows of model files:

Model File	File Size	Added Date	Actions
Meta Llama 3.1 8b Instruct Q5_K_M Meta-Llama-3.1-8B-Instruct-GGUF/Meta-Llama-3.1-8B-Instruct-Q5_K_M.gguf	5.34 GB	26/07/2024	Chat with Model Info Delete
Meta Llama 3 8b Instruct Q2_K Llama-3-8B-Instruct-GGUF/Meta-Llama-3-8B-Instruct-Q2_K.gguf	2.96 GB	09/06/2024	Chat with Model Info Delete



Robius 旗舰应用



● Moly



The screenshot shows the Robius application interface. On the left, there's a sidebar with icons for Discover, Chat, and My Models. The 'My Models' section is currently selected, displaying a list of available models. One model, 'Meta-Llama-3.1-8B-Instruct-Q5_K_M.gguf', is highlighted. A modal window for this specific model is open in the center. The modal title is 'Meta-Llama-3.1-8B-Instruct-Q5_K_M.gguf'. It shows the path where the model is stored: '/Users/zhangalex/Library/Application Support/com.moxin-org.moxin/model_downloads/second-state/Meta-Llama-3.1-8B-Instruct-GGUF/Meta-Llama-3.1-8B-Instruct-Q5_K_M.gguf'. Below this, the model's metadata is displayed as a JSON object:

```
{
  "id": "second-state/Meta-Llama-3.1-8B-Instruct-GGUF",
  "name": "Meta-Llama-3.1-8B-Instruct-GGUF",
  "summary": "",
  "size": "8B",
  "requires": "",
  "architecture": "",
  "released_at": "2024-07-24T06:57:44Z",
  "files": [],
  "author": {
    "name": "second-state",
    "url": "https://github.com/second-state",
    "description": ""
  },
  "like_count": 0,
  "download_count": 218,
  "metrics": {}
}
```

At the bottom of the modal, there are two buttons: 'Copy to Clipboard' and 'Model Card on Hugging Face'.

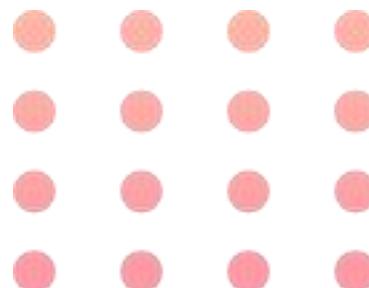
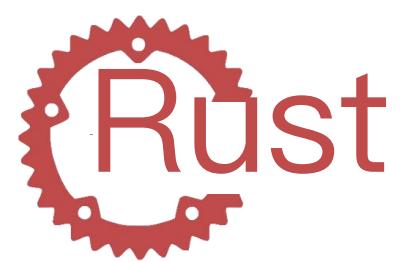


Robius 旗舰应用



● Moly

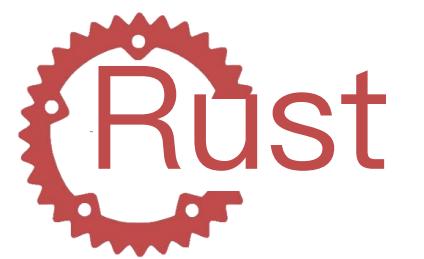
The screenshot displays the Robius application interface. On the left, a sidebar menu includes 'Discover' (with a magnifying glass icon), 'Agents' (listing 'Reasoner localhost:8000'), 'Chats' (listing 'New Chat' and 'Why Rust'), 'My Models' (listing 'Meta Llama 3 8b Instruct Q2_K' and 'Meta Llama 3 8b Instruct Q2_K Why Rust'), and 'Settings' (with a gear icon). The main workspace shows the Moly AI model interface. At the top, it lists three models: 'Meta-Llama-3-8B-Instruct-Q2_K.gguf' (llama, 8B, 2.96 GB), 'Meta-Llama-3.1-8B-Instruct-Q5_K_M.gguf' (8B, 5.34 GB), and 'Meta-Llama-3-8B-Instruct-Q2_K.gguf' (llama, 8B, 2.96 GB). Below the models, there is a section for 'Reasoner'. A message from the Moly AI model is shown, starting with 'How can I help you?'. A text input field at the bottom says 'Start typing or tag @model or @agent'. The URL in the browser bar is partially visible as 'http://carbon/01T/CKECKOUTS/makedao-24/424C/C1CXW43D/b04f492/...'. On the right side of the interface, there are two circular arrows: one pointing up and one pointing down.



Robius 旗舰应用



● Moly



The screenshot shows the Robius application interface. On the left, there's a sidebar with the following options:

- Discover (selected)
- Chat (selected)
- My Models
- Settings

The main area has two tabs at the top:

- Agents (selected)
- Chats

Under the Agents tab, there's a section for "Reasoner" located at "localhost:8000". Under the Chats tab, there are two entries:

- Meta Llama 3 8b Instruct Q2_K (New Chat)
- Meta Llama 3 8b Instruct Q2_K (Why Rust)

The right side of the interface shows a chat window for the "Meta-Llama-3-8B-Instruct-Q2_K.gguf" model. The model details are: llama, 8B, 2.96 GB. The message history starts with:

M How can I help you?

Below the message input field, there's a search bar and some descriptive text about the Reasoner agent:

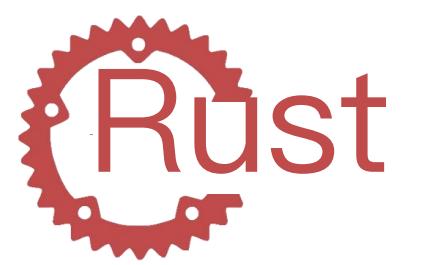
Search for a model or agent
Agents
Reasoner localhost:8000 An agent that will help you find good questions about any topic
Models
Meta-Llama-3.1-8B-Instruct-Q5_K_M.gguf
Meta-Llama-3-8B-Instruct-Q2_K.gguf

At the bottom of the interface, there are navigation arrows for up and down.

Robius 旗舰应用



● Moly



The screenshot displays the Robius application interface. On the left, a sidebar includes 'Discover' (with a magnifying glass icon), 'Agents' (listing 'Reasoner localhost:8000'), 'Chats' (listing 'Meta Llama 3 8b Instruct Q2_K New Chat' and 'Meta Llama 3 8b Instruct Q2_K Why Rust'), 'My Models' (with a folder icon), and 'Settings' (with a gear icon). The main area shows a chat window titled 'Meta-Llama-3-8B-Instruct-Q2_K.gguf' (llama, 8B, 2.96 GB). The window contains a message from 'Reasoner' about learning Rust, followed by a large teal box with a detailed 7-step guide. Below this, another message from 'Reasoner' provides additional steps, ending with a note about incorporating strategies into a learning plan. A text input field at the bottom says 'Start typing or tag @model or @agent'. A vertical toolbar on the right features up and down arrows.

Answer: 学习Rust的方法可以包括以下几步:

1. 开始学习基础概念: 了解Rust的所有权、借用和生命周期规则, 这些是Rust编程语言最重要的特性。
2. 阅读官方文档: Rust的官方文档提供了详尽的说明和示例, 帮助你掌握语言的各个方面。
3. 实践编写代码: 通过实际编写小程序来练习使用Rust, 并熟悉其语法和特性。
4. 加入社区: 参加Rust论坛、Reddit或其他在线社区, 与其他开发者分享你的体验和获取帮助。
5. 完成项目: 选择一个有挑战性的项目并尝试使用Rust来实现它, 这将有助于巩固你对语言的理解。
6. 观看视频教程: 通过YouTube或其他视频平台学习Rust编程, 视频教程可以帮助你更容易地理解复杂的概念。
7. 阅读书籍: 有多本关于Rust编程的书籍, 例如《The Rust Programming Language》和《Programming Rust》, 这将对你的学习有所帮助。

对以上内容进行补充, 英文回复

Reasoner

Answer: To further enhance your learning of Rust, consider the following additional steps:

8. Contribute to Open Source Projects: Engaging with open source projects written in Rust can provide real-world experience and expose you to best practices in coding and project management.
9. Utilize Online Courses: Platforms like Coursera, Udemy, or edX offer structured courses on Rust that can guide you through the learning process with interactive exercises and assessments.
10. Experiment with Rust's Ecosystem: Explore the Rust ecosystem by trying out popular libraries and frameworks, such as Rocket for web development or Tokio for asynchronous programming, to understand how Rust is applied in various domains.
11. Attend Meetups and Conferences: Participating in Rust meetups or conferences can help you network with other Rustaceans, learn from experienced developers, and stay updated on the latest developments in the Rust community.
12. Practice Problem-Solving: Use platforms like LeetCode or HackerRank to solve coding challenges in Rust. This will help you improve your problem-solving skills and become more proficient in the language.
13. Follow Rust Blogs and Newsletters: Subscribe to blogs, newsletters, or podcasts focused on Rust to keep up with new features, community news, and tutorials that can aid your learning journey.

By incorporating these strategies into your learning plan, you can deepen your understanding of Rust and become a more skilled programmer.

Chat with Reasoner ×

Start typing or tag @model or @agent

Robius 旗舰应用



Moly

The screenshot displays the Robius application interface. On the left, there's a sidebar with icons for Discover, Chat, My Models, and Settings. The main area shows the Moly model details: "Meta-Llama-3-8B-Instruct-Q2_K.gguf" (llama, 8B, 2.96 GB). Below this, a blue bar contains the text "how to learning Rust". A response from the "Reasoner" agent follows, detailing steps to learn Rust. Another blue bar below asks for further input: "对于前面的回答, 你还有什么补充, 请用英文输出". At the bottom, there's a chat window titled "Chat with Reasoner" with a placeholder "Start typing or tag @model or @agent".

Meta-Llama-3-8B-Instruct-Q2_K.gguf llama 8B 2.96 GB

how to learning Rust

Meta-Llama-3.1-8B-Instruct-Q5_K_M.gguf

Answer: 学习Rust的方法可以包括以下几步:

1. 开始学习基础概念: 了解Rust的所有权、借用和生命周期规则, 这些是Rust编程语言最重要的特性。
2. 阅读官方文档: Rust的官方文档提供了详尽的说明和示例, 帮助你掌握语言的各个方面。
3. 实践编写代码: 通过实际编写小程序来练习使用Rust, 并熟悉其语法和特性。
4. 加入社区: 参加Rust论坛、Reddit或其他在线社区, 与其他开发者分享你的体验和获取帮助。
5. 完成项目: 选择一个有挑战性的项目并尝试使用Rust来实现它, 这将有助于巩固你对语言的理解。
6. 观看视频教程: 通过YouTube或其他视频平台学习Rust编程, 视频教程可以帮助你更轻松地理解复杂的概念。
7. 阅读书籍: 有多本关于Rust编程的书籍, 例如《The Rust Programming Language》和《Programming Rust》, 这将对你的学习有所帮助。

对于前面的回答, 你还有什么补充, 请用英文输出

Reasoner

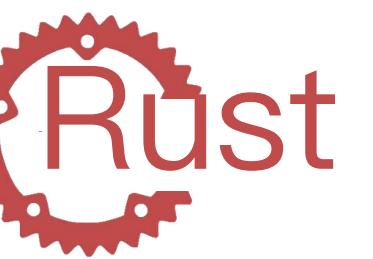
Answer: If you would like me to elaborate on a specific topic or provide additional information related to the previous response, please specify the area of interest or the details you would like to know more about. I'm here to help clarify and expand on any points as needed!

Answer: 学习Rust的方法可以包括以下几步:

1. 开始学习基础概念: 了解Rust的所有权、借用和生命周期规则, 这些是Rust编程语言最重要的特性。
2. 阅读官方文档: Rust的官方文档提供了详尽的说明和示例, 帮助你掌握语言的各个方面。
3. 实践编写代码: 通过实际编写小程序来练习使用Rust, 并熟悉其语法和特性。
4. 加入社区: 参加Rust论坛、Reddit或其他在线社区, 与其他开发者分享你的体验和获取帮助。
5. 完成项目: 选择一个有挑战性的项目并尝试使用Rust来实现它, 这将有助于巩固你对语言的理解。
6. 观看视频教程: 通过YouTube或其他视频平台学习Rust编程, 视频教程可以帮助你更轻松地理解复杂的概念。
7. 阅读书籍: 有多本关于Rust编程的书籍, 例如《The Rust Programming Language》和《Programming Rust》, 这将对你的学习有所帮助。

Chat with Reasoner

Start typing or tag @model or @agent



Robius 旗舰应用



The screenshot shows the Robrix desktop application interface. At the top, there's a navigation bar with tabs: Home, 测试, Robius General, Embassy, Robrix, esp-rs, Bevy Game Engine, and Testing2. Below the navigation bar is a search bar labeled "Search" and a "Rooms" section with a search bar. A sidebar on the left lists various rooms with their names, icons, and last activity times. The main area features a "Welcome to Robrix!" message and a text block about the Matrix client's development status. It also includes a link to the latest announcements in the Matrix channel: #robrix:matrix.org.

Welcome to Robrix!

Our Matrix client is under heavy development. For now, you can access the rooms you've joined in other clients. But don't worry, we're working on expanding its features.

Look for the latest announcements in our Matrix channel: #robrix:matrix.org

Rooms

- Rust Embedded 46 mins ago hemanth kundrapu joined this room.
- In WebGPU we Rust Friday teoxoy: I think making it pub would be fine: [@jimb:mozilla.org](#) thoughts?
- 测试 Friday Alex: 你好 @alex
- Embassy 17 mins ago matt-rodgers: I'm using --release and lto=true (which I think is the same). I'll see if I can come up with a
- Robius General Friday JackyLee changed their profile picture.
- Robrix Friday JackyLee changed their profile picture.
- esp-rs Friday killerfoxi: it does eventually work after a few resets
- Bevy Game Engine Wednesday db: it's nice to have two things to grind so i dont burn out on either one
- Makepad Friday

This screenshot shows the Robrix desktop application interface, similar to the one on the left. It displays a list of rooms with their names, icons, and last activity times. The rooms listed are Rust Embedded, In WebGPU we Rust, 测试, Embassy, Robius General, Robrix, esp-rs, Bevy Game Engine, and Makepad. The interface includes a search bar at the top and a sidebar on the left.

Welcome to Robrix!

Our Matrix client is under heavy development. For now, you can access the rooms you've joined in other clients. But don't worry, we're working on expanding its features.

Look for the latest announcements in our Matrix channel: #robrix:matrix.org

Rooms

- Rust Embedded 46 mins ago hemanth kundrapu joined this room.
- In WebGPU we Rust Friday teoxoy: I think making it pub would be fine; [@jimb:mozilla.org](#) thoughts?
- 测试 Friday Alex: 你好 @alex
- Embassy 18 mins ago matt-rodgers: I'm using --release and lto=true (which I think is the same?). I'll see if I can come up with a
- Robius General Friday JackyLee changed their profile picture.
- Robrix Friday JackyLee changed their profile picture.
- esp-rs Friday killerfoxi: it does eventually work after a few resets
- Bevy Game Engine Wednesday db: it's nice to have two things to grind so i dont burn out on either one too fast
- Makepad Friday

This screenshot shows the Robrix mobile application interface. It displays a conversation in the "Matrix Rust SDK" channel. The messages are from users frebib, poljar, and frebib again. The messages include a notification about EleWeb not rendering well, a cat emoji, and a code diff. The interface includes a search bar at the top and a text input field at the bottom.

Matrix Rust SDK

- frebib 1:08 pm lol EleWeb does not render that well 2024-12-11
- poljar 1:08 pm Ah, no. That's just for the notification stuff. 2024-12-11
- frebib 1:09 pm lol EleWeb does not render that well
- frebib 1:08 pm Presumably this <https://github.com/matrix-org/matrix-rust-sdk/pull/4159/files#diff-d16dcf09afbab7ae166212f775a19928d6631642a910e1b098407aea658b084R82>
- poljar 1:09 pm diff --git a/crates/matrix-sdk-ui/src/room_list_service/mod.rs b/crates/matrix-sdk-ui/src/room_list_service/mod.rs index 441c79944..edb9566fd 100644 --- a/crates/matrix-sdk-ui/src/

Write a message (in Markdown) ...



Robius 旗舰应用



● Robrix

This device is fully verified.

Rooms

- Rust Embedded 47 mins ago hemanth kundrapu joined this room.
- In WebGPU we Rust Friday teoxoy: I think making it pub would be fine; [@jimb.mozilla.org](#) thoughts?
- 测试 Friday Alex: 你好 @alex
- Embassy 18 mins ago matt-rodgers: I'm using --release and lto=true (which I think is the
- Robius General Friday JackyLee changed their profile picture.
- Robrix Friday JackyLee changed their profile picture.
- esp-rs Friday killerfoxi: it does eventually work after a few resets
- Bevy Game Engine Wednesday db: it's nice to have two things to grind so i dont burn out on either one
- Makepad Friday Nico Burns joined this room.
- 魅力 Rust 2025-01-09 Feeds: New post in Rust Blips.

Welcome to Robrix!

Our Matrix client is under heavy development. For now, you can access the rooms you've joined in other clients. But don't worry, we're working on expanding its features.

Look for the latest announcements in our Matrix channel: #robrix:matrix.org

Rooms

- In WebGPU we Rust Friday teoxoy: I think making it pub would be fine; [@jimb.mozilla.org](#) thoughts?
- 测试 Friday Alex: 你好 @alex
- Embassy 15 mins ago matt-rodgers: I'm using --release and lto=true (which I think is the
- Robius General Friday JackyLee changed their profile picture.
- Robrix Friday JackyLee changed their profile picture.
- esp-rs Friday killerfoxi: it does eventually work after a few resets
- Bevy Game Engine Wednesday db: it's nice to have two things to grind so i dont burn out on either one
- Makepad Friday Nico Burns joined this room.
- 魅力 Rust 2025-01-09

5:07 pm 2025-01-15 Blender feels the same. Many options but I guess once you know them to some degree, you piece them together, like Legos

5:09 pm 2025-01-15 db yeah a lot of it is like subroutines that kind of become muscle memory, plus the creativity aspect of thinking of novel ways to combine these subroutines :+1: 1

5:10 pm 2025-01-15 i do think skilled modelers have a sort of magic though

5:11 pm 2025-01-15 db i do think skilled modelers have a sort of magic though

5:11 pm 2025-01-15 przmk Oh yeah, it's definitely not easy

5:11 pm 2025-01-15 Alright, now I kinda want to get back into doing some Bevy

联系人

- R Rusty @rusty_striker:matrix.org:matrix.org
- N Ninmi @Ninmi:matrix.org:matrix.org
- A Asaki @death_dimension:matrix.org:matrix.org
- P przmk @przmk:ody.si:matrix.org
- M Matrix Traveler (bot) @voyager:t2bot.io:matrix.org
- A adsick @adsick:matrix.org:matrix.org



Robius 旗舰应用



● Robrix



The screenshot shows the Robrix application interface. On the left, there is a sidebar titled "Rooms" with a search bar and a list of rooms. The rooms listed are:

- db: it's nice to have two things to grind so i dont burn out on either one
- Makepad
- 魅力 Rust
- Cork Guo
- Cork Guo
- Rust Science
- Empty Room (was 张浩翔)
- @Tyrese Luo, 张浩翔
- Testing2

On the right, the main window shows a conversation in the "Testing2" room. The messages are:

- 9:34 am 2024-12-17 db: trying room ping again: @room
- 9:38 am 2024-12-17 Kevin Boos testing from my account: @room
- 9:41 am 2024-12-17 Kevin Boos ah ok, so it works fine, it's just that Cinny doesn't send the room mention properly when you select the "@room" option
- 4:52 am 2024-12-18 Kevin Boos testing complex link:
App::handle_app_lost_focus()\nsrc/sliding_sync.rs:524:17 - sync loop was stopped by client error processing:
error sending request for url (https://slidingsync.lab.matrix.org/_matrix/client/unstable/org.matrix.msc3575-sync?pos=152&timeout=30000)
- 4:54 am 2024-12-18 Kevin Boos src/app.rs:285:9 - App::handle_app_got_focus()\nsrc/app.rs:288:9 - App::handle_app_lost_focus()\nsrc/app.rs:285:9 - App::handle_app_got_focus()\nsrc/app.rs:288:9 - App::handle_app_lost_focus()\nsrc/sliding_sync.rs:524:17 - sync loop was stopped by client error processing: error sending request for url (https://slidingsync.lab.matrix.org/_matrix/client/unstable/org.matrix.msc3575-sync?pos=152&timeout=30000): operation timed out
- 5:24 am 2024-12-18 Kevin Boos bare link sent from robrix: https://slidingsync.lab.matrix.org/_matrix/client/unstable/org.matrix.msc3575-sync?pos=152&timeout=30000

At the bottom, there is a text input field with placeholder text "Delete a message (in Markdown)" and a message button.



Robius 旗舰应用

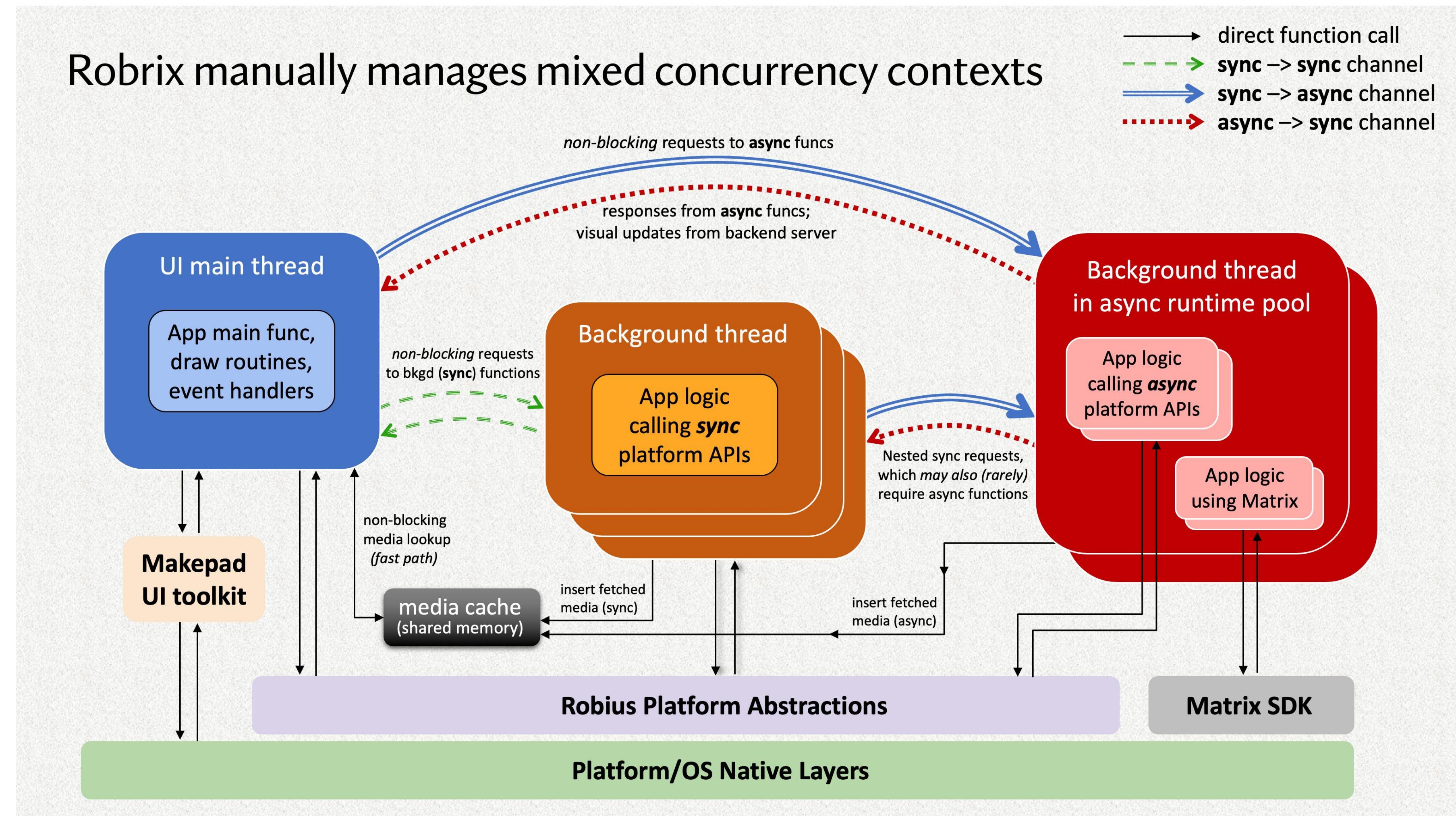
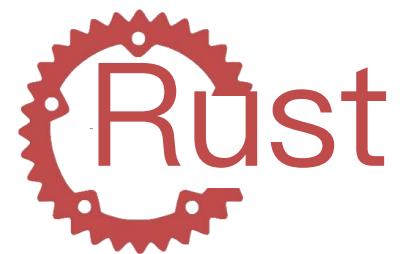


● Robrix

The screenshot displays the Robius application interface. On the left, there's a sidebar with a search bar at the top, followed by a "Rooms" section containing a search input and a list of rooms. The rooms listed are: "Rust Embedded" (49 mins ago), "In WebGPU we Rust" (Friday), "测试" (Friday), "Embassy" (20 mins ago), "Robius General" (Friday), "Robrix" (Friday), "esp-rs" (Friday), "Bevy Game Engine" (Wednesday), and "Makepad" (Friday). Each room entry includes a timestamp, a message from a user, and a brief description. The main area shows a detailed conversation in the "In WebGPU we Rust" room. The conversation starts with a message from "teoxoy" about making it pub. Other users like "ErichDonGubler" and "wumpf" respond. Later, "Samson" discusses a specific Rust macro. A message from "l11d" asks about visibility changes in the "naga" crate. Finally, "teoxoy" replies to a previous message. At the bottom, there's a message input field and a scroll indicator showing 17 messages.



Robius 旗舰应用



Robius 旗舰应用



● Robrix

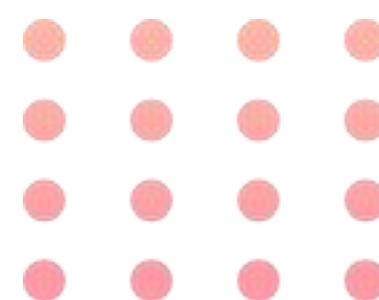


初步性能数据：

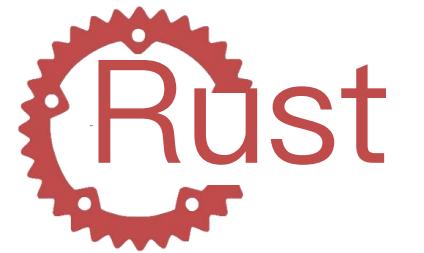
Robrix 在一台较旧的 M1 Macbook Pro 上始终保持最高 120 FPS，即使在并排显示 10 个以上房间时，依然流畅且响应迅速。

我们在使用的系统 RAM 仅占主要基于 Electron 的 Matrix 桌面客户端显示单个房间所需的 26-30%。

Robrix 没有任何平台特定的代码。这使得维护和快速开发功能/修复 bug 变得简单，因为您不必考虑每个平台的特性。

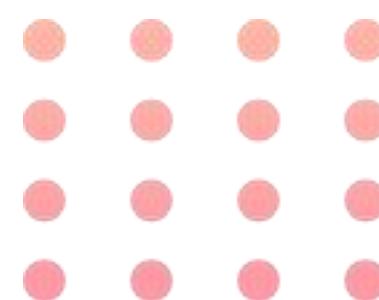


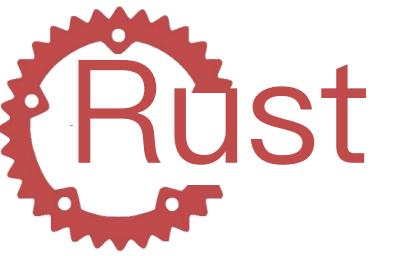
Robius 生态建设



旗舰应用的研发过程也是打磨 Robius 生态的过程

- `robius-packaging-commands`, 用于打包逻辑和构建配置, 也为`cargo-packager`做了贡献
- `moly-runner`, 安装和配置 WasmEdge WASM 运行时, 本地运行 LLM
- 丰富了 Makepad Widget





Robius 生态建设



目前 Robius 支持的核心 UI 引擎： Makepad

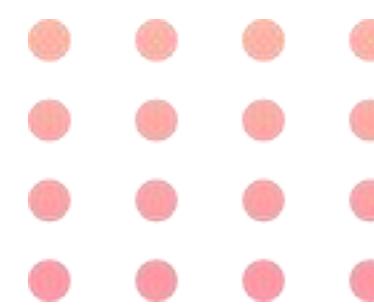
源码地址: <https://github.com/makepad/makepad/tree/rik>

Makepad Studio 提供 IDE，供开发者和设计人员使用，而 Makepad Framework 则是 底层UI 框架。

Makepad Framework 主要包含两大部分：

makepad-platform： 平台抽象层。它对跨平台的各种操作做了抽象和封装。

makepad-widget： Makepad 内置 UI Widget组件库。它提供了一系列内置的 Widget 组件，用于构建用户界面和一个支持 DSL 设计的保留模式小部件系统。

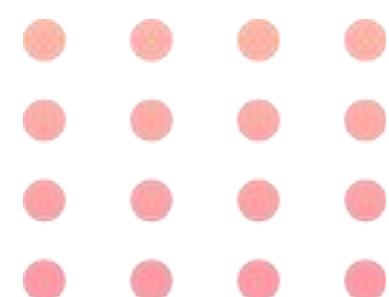


Robius 生态建设 Makepad



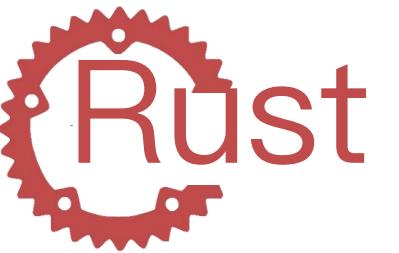
Makepad 声明式 UI / Live DSL

```
1 live_design! {
2     Button = {{Button}} {
3         color: #f00
4     }
5 }
6
7 #[derive(Live)]
8 pub struct Button {
9     #[live] color: DVec4,
10 }
```



```
1 // 1. 圆角矩形
2 shapes = <View> {
3
4     show_bg: true, // 启用背景绘制
5     draw_bg: { // 主要的着色器配置
6         // 可以针对每个实例修改的实例变量
7         instance stroke_width: 1.0 // 描边宽度
8         instance border_width: 2.0 // 边框宽度
9         instance border_color: #000 // 边框颜色
10        instance fill_color: #f00f // 填充颜色
11
12        // 辅助函数: 创建圆角矩形
13        fn rounded_rectangle(self) -> vec4 {
14            // 创建一个2D有符号距离场视口, 映射到我们的矩形尺寸
15            let sdf = Sdf2d::viewport(self.pos * self.rect_size)
16
17            // 绘制一个盒子 (圆角矩形), 参数依次为:
18            sdf.box(
19                0.0, // x位置 (左边缘)
20                0.0, // y位置 (顶边缘)
21                self.rect_size.x, // 矩形宽度
22                self.rect_size.y, // 矩形高度
23                10.0 // 圆角半径 - 使角落变圆
24            );
25
26            // 用fill_color填充形状, 同时保留SDF用于边框绘制
27            sdf.fill_keep(self.fill_color);
28
29            // 添加指定颜色和宽度的边框
30            sdf.stroke(self.border_color, self.border_width);
31
32            // 返回最终合成的颜色结果
33            return sdf.result;
34        }
35
36        // 主像素着色器函数
37        fn pixel(self) -> vec4 {
38            // 必须加 return
39            return self.rounded_rectangle();
40
41        }
42    }
43 }
```

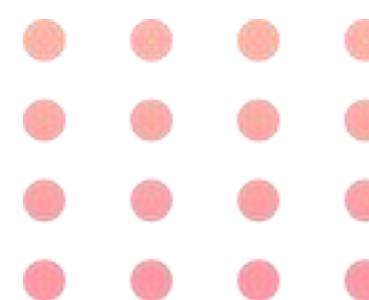




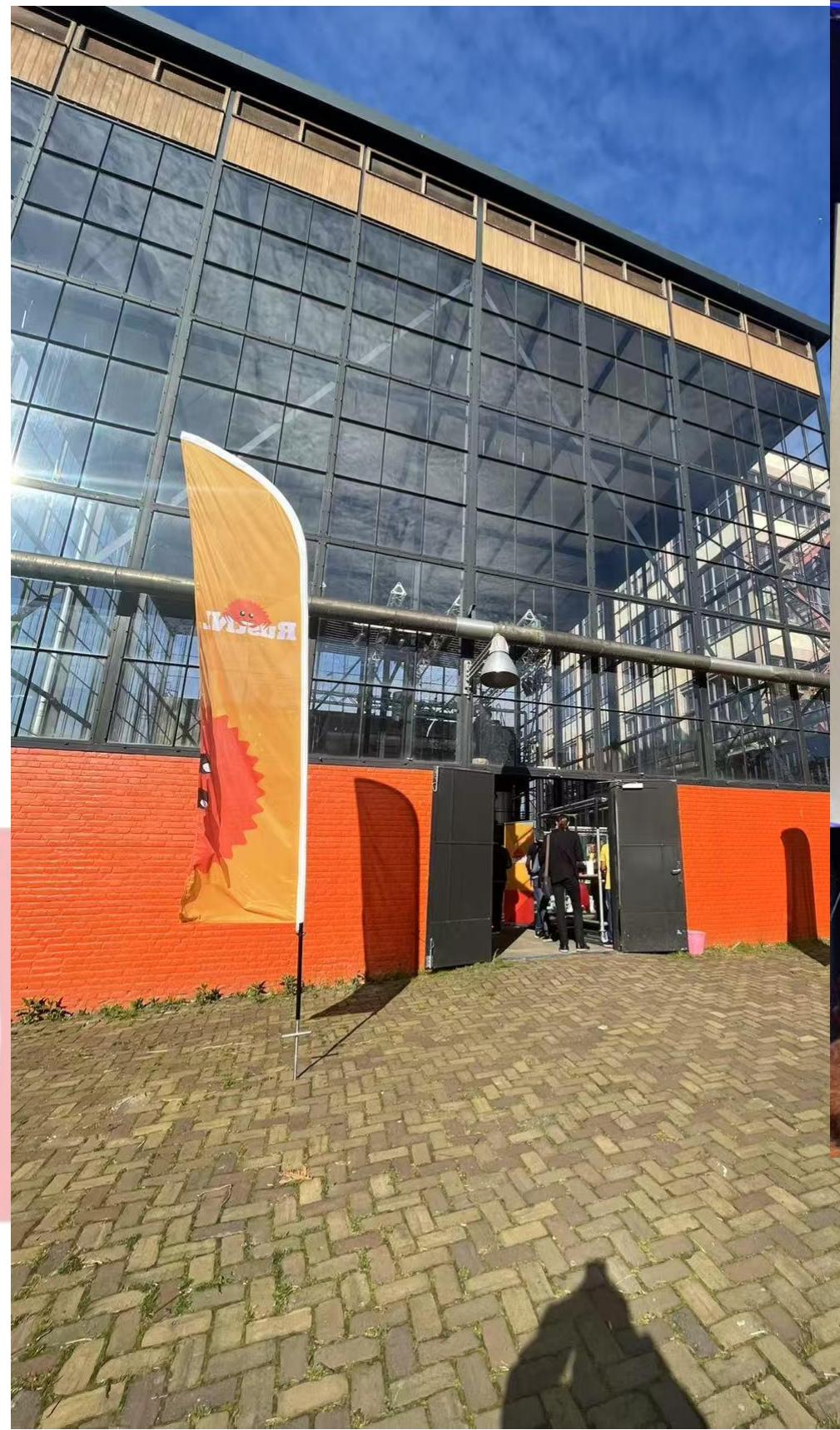
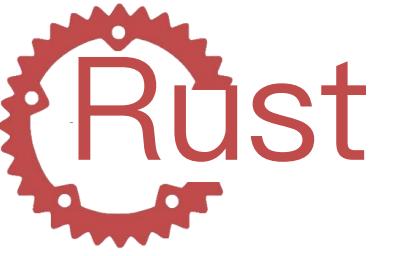
Robius 生态建设 Makepad



	星	贡献者	使用者	上次更新时间	独立线程渲染	2D库	渲染后端	多窗口管理	过渡动画	物理动画	残障支持	针对手机开发	默认安卓支持
iced	24.9K	250	4.6K	2天前	否	skia	wgpu	否	否	否	是	否	否
slint	17.7K	160	1.7K	1天前	否	skia	opengl/vulkan	否	是	否	是	否	是
makepad	5.2K	43	N/A	3周前	是	makepad-draw	opengl	否	是	否	否	是	是
xilem	3.8K	175	N/A	2天前	否	vello	wgpu	否	是	否	是	否	否
rui	1.8K	12	N/A	5个月前			wgpu						否
vizia	1.6K	29	141	1周前			wgpu						否



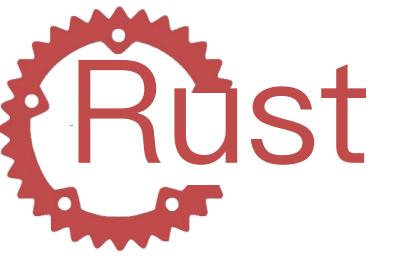
Robius 生态建设 社区建设



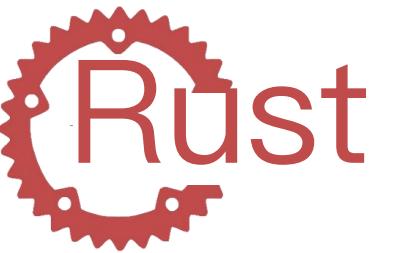
Robius 生态建设 社区建设



Robius 生态建设 社区建设



Robius 2025 展望

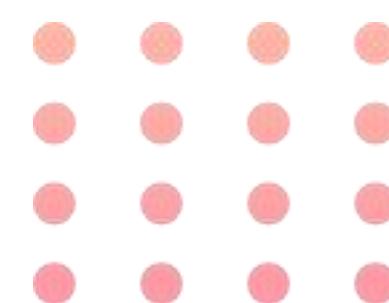


- 更多 Rust 抽象以支持平台特性

文件/图像/媒体选择器/本地系统通知/弹出消息/状态栏图标/长时间运行的后台任务/服务/相机访问与配置/音频输入（麦克风）/触觉/振动 等等

- 与其他 UI 工具包的无缝集成

例如 *Dioxus*、*eGUI* 等，探索更深层次的集成和一流的兼容性



- 更好、更自动化的构建工具

也可以用于其他任意 UI 工具包，而不仅仅是 *Makepad*

- 组织更多的会议和聚会

2025 年 *RustWeek*（前称“*RustNL*”），于 5 月在荷兰举行

2025 年秋季的 *GOSIM China*

2025 年 *Robius* 社区线上线下活动





Thanks

