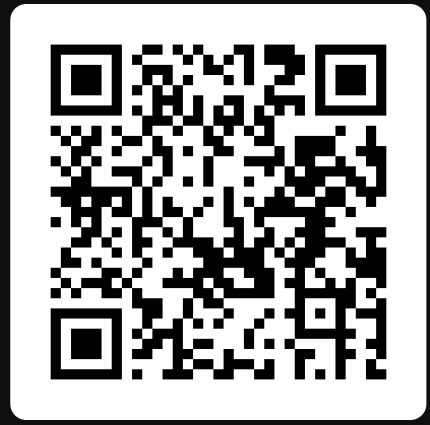
Scan to ask questions

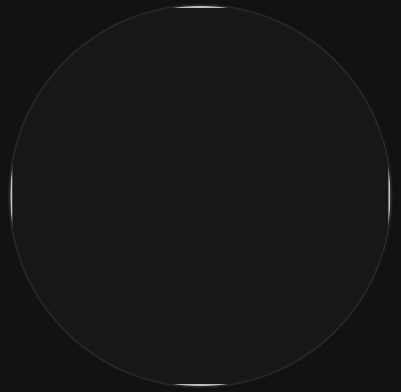


Contributing to Open Source with Cursor

December 25, 2025

Agenda

- 🚀 Workshop
- ❓ Q/A
- 💻 Hackathon
- 👥 Networking
- 🎉 End



Usman Siddique

Software Engineer at **Motive**

An Analogy: Getting Across Town 🌆

Imagine you need to get across town. There are many ways to do it...

Walking

- 💰 Free
- ⏱️ Takes longest
- 💪 Most effort

Biking

- 💰 Some cost
- ⏱️ Faster
- 💪 Moderate effort

Driving

- 💰 Most expensive
- ⏱️ Fastest
- 💪 Least effort

🤔 You have the choice between **time**, **money**, **reliability**, and **effort**

Similarly: Building Software 💻

No Tools

- 💰 Free
- ⏱️ Slowest
- ⚠️ More errors

🛠️

IDE & Tooling

- 💰 Some cost
- ⏱️ Faster
- ✅ Feedback

🤖

AI Tooling

- 💰 Costs more
- ⏱️ Fastest
- 🎯 Practice needed

🚀 AI tools help you build **faster** with **practice**

Cursor

AI Models = Super Intelligent APIs

Stripe API

Handle payments

```
stripe.charges.create()
```

Twilio API

Send messages

```
twilio.messages.create()
```

AI Model API

Solve any task

```
openai.chat.completions()
```

⚠️ The key difference: **No guaranteed identical results**

AI Hallucinations 🌀

When AI **confidently generates incorrect information** that seems plausible

🤔 Why does this happen?

- AI predicts next token based on patterns
- Like powerful autocomplete
- It doesn't say "I don't know" - generates what seems most likely

💻 In coding, this means...

- ❌ Inventing APIs that don't exist
- ❌ Wrong function signatures
- ❌ Outdated syntax or methods
- ❌ Plausible but buggy logic

✅ **The fix:** Develop a **verification mindset** – every suggestion is a starting point, not a final answer

Understanding Tokens 🧩

What is a Token?

A token can be a word or parts of a word:

`hello` → 1 token

`un` `believ` `able` → 3 tokens

💡 **Why it matters:** Tokens = pricing + speed

Input vs Output Tokens

📥 **Input Tokens** 💰 Lower cost

Your prompt + context

📤 **Output Tokens** 💸 2-4x more!

Model's response

🌊 **Why streaming?** AI generates tokens one at a time, predicting the next based on previous ones.

Context Window 📦

Your Prompt

What you ask

Chat History

Previous messages

Code Context

Files & snippets

⚠️ **When context fills up:** AI starts "forgetting" earlier parts → answers get worse

💡 **Mental Model:** Watch the context indicator – **when it's filling up, start a new chat**

Mental Model Summary 🧠

You are in control

LLMs amplify your productivity

Non-deterministic

Same prompt → different responses

LLMs hallucinate

You must verify everything

Watch context window

New chat at ~90% filled

Contributing to Open Source with Cursor

Understanding any codebase in minutes

What is Open Source? 📖

Software released under a license where the **copyright holder grants users the right** to use, study, change, and distribute the software and its source code to anyone for any purpose.

🏗️ Major Projects

- 🐧 Linux
- 💻 VS Code
- ⚛️ React
- 🐍 Python
- ☸️ Kubernetes
- 🌐 Chromium
- 🧠 TensorFlow
- 💚 Node.js
- 🦊 Firefox
- 🎨 Blender
- 🔀 Git
- 🐘 PostgreSQL

🚀 My favourites

- 🔗 Dub.co
- 🗺️ Roadmap.sh
- 🎓 freeCodeCamp
- 🛠️ Build Your Own X

Why Contribute to Open Source? 🤔

⚠️ **If you're doing it just to get a job... DON'T.**

Open source requires **patience** and **genuine interest**.

✅ Do it if you want to...

Improve your **skills**

Build a better **mindset**

Build **relationships**

Have real **impact**

Make work **public**

Where to Find Open Source Projects 🔍

☀️

Google Summer of Code

Paid summer program for students to contribute to open source

🚀

LFX Mentorship

Linux Foundation program with stipends for contributors

🎓

MLH Fellowship

12-week internship alternative with real projects

🪟

Microsoft FOSS Fund

Microsoft's open source contribution programs

🌈

Outreachy

Paid internships for underrepresented groups in tech

🔥

GitHub Explore

Find trending repos and good first issues directly

💡 Start small, build your portfolio, and grow your network!

Steps to Your First Contribution 🎯

🏷️ 2. Good First Issues

- Look for `good first issue` labels
- Start small, build confidence
- Ask Cursor to explain the issue context

📋 3. CONTRIBUTING.md

- Read the contributing guidelines
- Understand code style & conventions
- Check testing requirements

4. Writing Good Pull Requests 

💬 Add "Why" Comments

Don't just explain what the code does – explain **why** it does it.

```
// We use debounce here to
// prevent API spam on
// rapid keystrokes
```

📦 Make PRs Small

- ✓ Reviewed more quickly
- ✓ Reviewed more thoroughly
- ✓ Less blocking on reviews
- ✓ Simpler to roll back

📋 Clear Description

- **What** changed?
- **Why** this approach?
- **How** to test it?
- Link to the **issue**

💡 A good PR tells a **story** – reviewers should understand your thinking without asking questions

Common Mistakes to Avoid ⚠️

❌ Blindly Trusting AI Output

Always review and understand the code AI generates. You're responsible for your commits!

❌ Large First PRs

Start small! A 10-line fix is better than a 500-line refactor for your first contribution.

❌ Ignoring Project Guidelines

Each project has its own conventions. Read CONTRIBUTING.md and follow the existing patterns.

❌ Not Understanding Your Change

If you can't explain what your code does, don't submit it. Take ownership of every line.

Bonus: Cursor Cloud Agents + Slack 💬

Work on tasks directly from Slack!

Example message:

```
@cursor fix the login bug in auth.ts and open a PR
```

With Cursor's Slack integration, Cloud Agents can work on your tasks by simply mentioning @cursor with a prompt.

Thank You! 🙏

Let’s Connect 🤝