

**Scan to ask questions**



# **Contributing to Open Source with Cursor**

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# Agenda

 Workshop

 Q/A

 Hackathon

 Networking

 End



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# 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- ✗ Outdated syntax or methods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



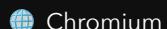
React



Python



Kubernetes



Chromium



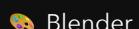
TensorFlow



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 