

Maintaining OSS in the age of AI

Reduce maintainer load, improve quality

Taos Transue (taos.j.transue@gmail.com)

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Tragedy of the Commons of Maintainer Attention

The maintainer attention commons is

1

Shared

Contributions draw on the same attention pool.

2

Finite

AI agents are unreliable judges of quality.

3

Unpriced

No contributor pays for what they use.

**Increasing
contributions
exhausts attention.**

How can we leverage the available attention to handle the new contribution scale?

Effort was a good quality indicator

Writing software used to come from human effort entirely.

Contributors had to write the patch first

- Test that it worked
- Debug
- Integrate maintainer/community feedback

By integrating feedback, contributors upskilled for future contributions.

AI Agents are driving required effort to zero

WHAT GOT BETTER

- More people can contribute and participate.
- Basic project maintenance is more automatable.

WHAT GOT WORSE

- Huge contribution volume.
- Share of quality contributions.
- Share of contributors who continue contributing.

Reviewing used to have two benefits: a better project and, a new trained colleagues. As contribution noise increases, payoff for review effort falls.

Towards a scalable review process

We need machinery to filter and sort it.

1 Pace incremental improvements

Generate the small improvements yourself at a comfortable pace.

2 Filter AI noise

Ensure requests for maintainer attention got human contributor attention.

3 Improve what arrives

Aggregate the quality parts of your contributors' PRs.

Slow loops

A small agent pull request a day.

EXAMPLE SLOW LOOPS

Check documentation against the current implementation.

Small code refactors:

- Code API consistency

“Drive-by” pull requests:

- E.g., Typo fixes, etc.

You're not blocking contributors with a genuine interest in your project.

Filtering AI agent noise

**Find PRs with no human effort
with an ensemble of *simple filters*.**

Automatically detecting AI code is a tricky arms race.

- We want contributors that try, regardless of their AI usage.

THREE FILTERS, WEAKEST TO STRONGEST

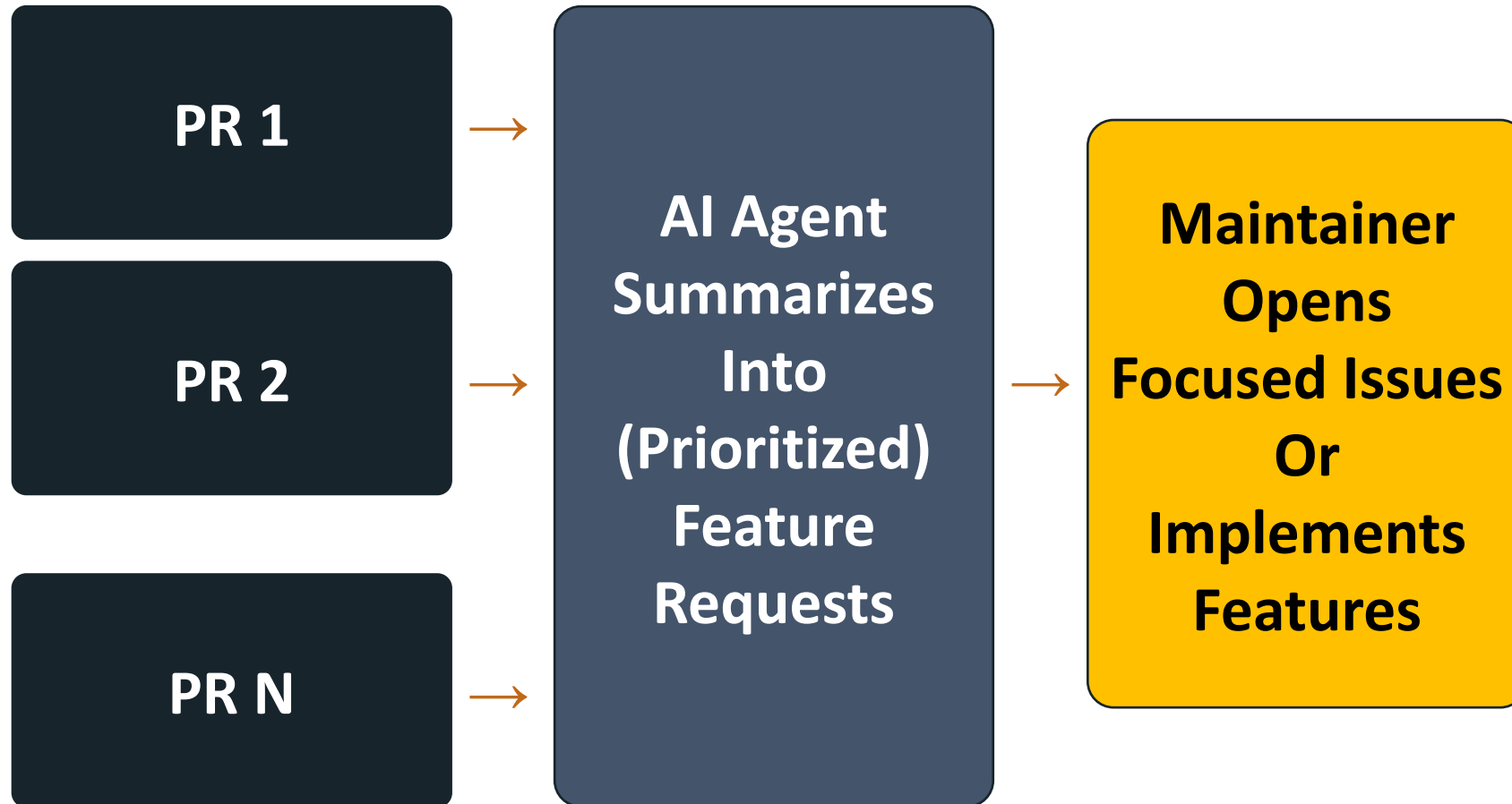
1 PR template checkbox
Agents might fail this now.

2 The disclosure file
Humans open PRs only. If an agent does, it must disclose so in the diff.

3 PRs reference an open issue
Only maintainers create issues.

Improving what PRs arrive; no more merging PRs?

PRs may become the new method of feature requests.



Supporting your users using AI agents

Introduction to writing AI agent skills

AI hallucination-driven development

- AI has read lots and lots of code.
- If agents are hallucinating a particular API in your project,
 - consider implementing it.

A skill is saved context you and the agent can call

Temporary training of an agent, delivered through context.

SKILL.md

Name, description What and when.

Body Main instructions.

References Loaded on demand.

SKILL CONTENT

Capability

Teach the agent something it can't do reliably yet.

Preference

Project preferences: review checklists, style guides. AGENTS.md

The two skills to support users

1 Shared vocabulary

Define your project's domain terms for the agent.

- Improves user/agent alignment

2 Interview, then plan

Interview the user on goals



Generate implementation plan

Writing effective skills

- 1 **A good description is critical**
Determines if the skill is used.
 - Need WHAT and WHEN
- 2 **Give clear direction**
No passive “we recommend”.
- 3 **200--500 lines long**
Reference to longer text in the skill.

Matt Pocock. Building Great Agent Skills: The Missing Manual.

<https://www.youtube.com/watch?v=UNzCG3lw6O0>

Philipp Schmid. Don't Ship Skills Without Evals.

<https://www.youtube.com/watch?v=0vphxNt4wyk>

34% → 50%

Task success rate improvement
with skills. (SkillsBench)

Skills drift like documentation.
Check alignment with slow loops.