

No, Copilot is not your “pair”

Why AI in your IDE doesn't replace coding with other humans

Awesome—this is a strong foundation, and I love the tone and clarity you're going for. The structure, punchy claims, and through-line are already compelling.

Jon Fazzaro

Programmer Analyst

Software Engineer

Software Architect

Agile Coach

Senior Consultant

Managing Consultant

Staff Engineer



Jon Fazzaro

Agile Coach *n*.

a Jira administrator who dives at every chance to be the team's secretary,
crowbars Scrum jargon into every conversation,
and reads the screen to a room full of people who can definitely already read.
(not what I do)



Jon Fazzaro

Technical Coach

Software Product Engineering Coach

Lean/XP Software Team Leader

Lead Software Practitioner/Leader/Agitator

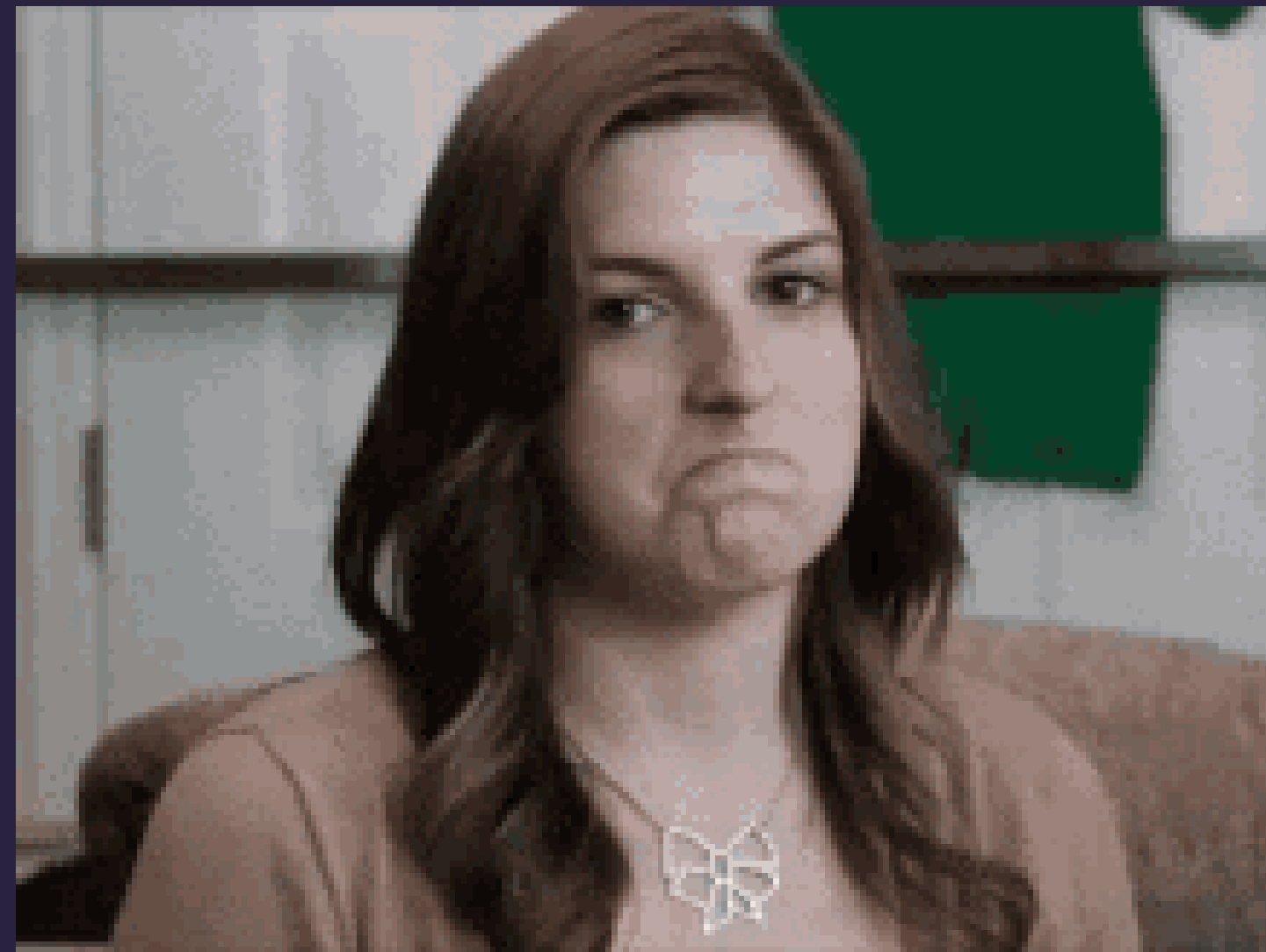
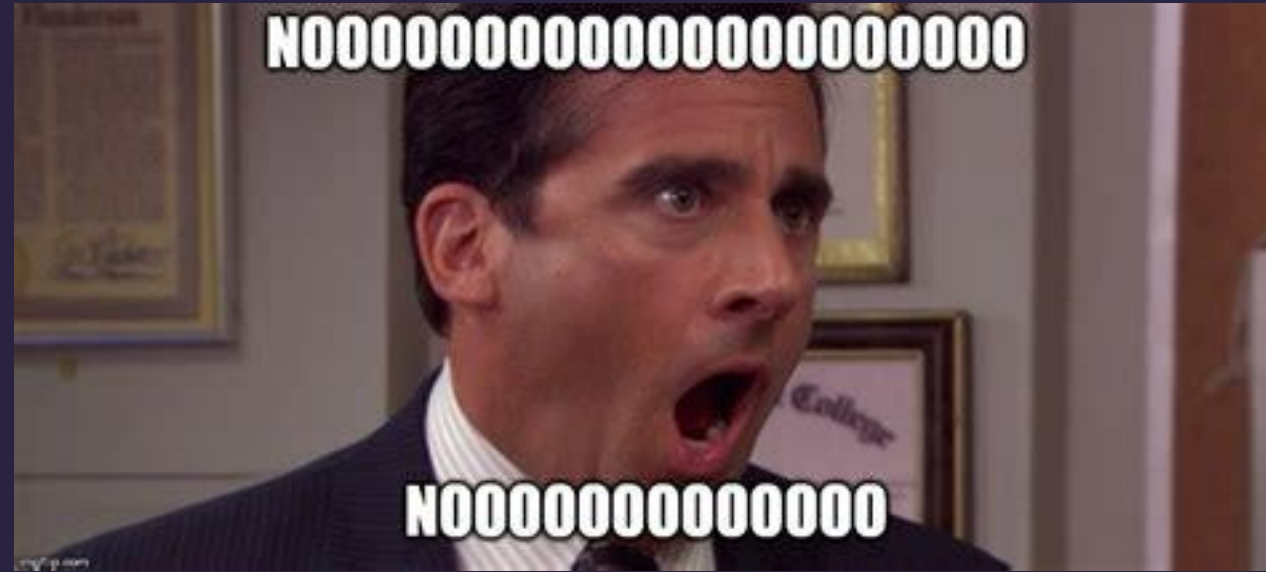
Software Leader/Benevolent Cage-Rattler

Subject Matter Expert in Developer Experience and Productivity

Nerd Coach

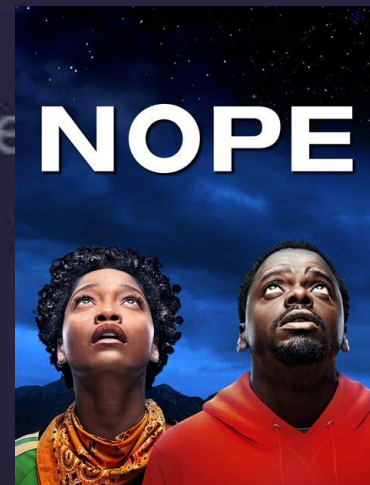


The Problem



Your AI pair programmer

GitHub Copilot uses the **NOPE** index to suggest code and entire functions in sight from your editor.



write_sql.go

```
1 #!/usr/bin/env ts-node
2
3 import { fetch } from "fetch-h
4
5 // Determine whether the senti
6 // Determine whether the sentiment of text is positive
```



True Story: You Aren't Gonna Need It

Perfect. This is gold.

It's tight, relatable, and directly supports your argument. We'll absolutely want to include this story in the talk — but even more, this is a pattern we'll want to



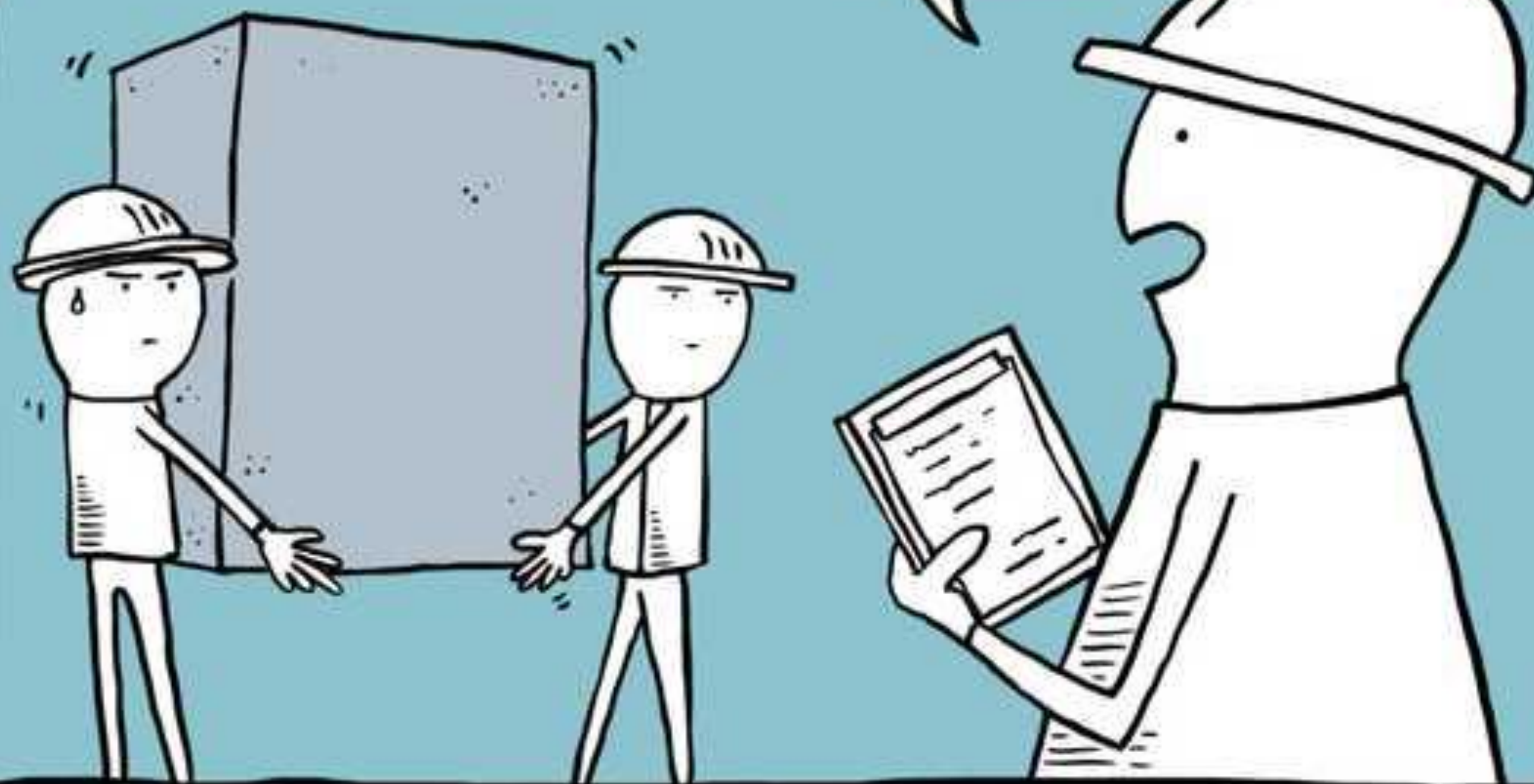


(image via Industrial Logic)



PAIR - PROGRAMMING

IT WOULD
GO FASTER IF
EACH ONE OF YOU
TOOK ONE.



@VINCENTDNL

Monday, June 30, 2014

Llewellyn's strong-style pairing

Arlo Belshee once labeled my particular style of Pair Programming "Llewellyn's strong-style pairing"

The golden rule for this style of pairing is:

*"For an idea to go from your head into the computer
it MUST go through someone else's hands"*



The Process

This style is actually very close to an actual navigator / driver situation in a car or on a boat. With all the high



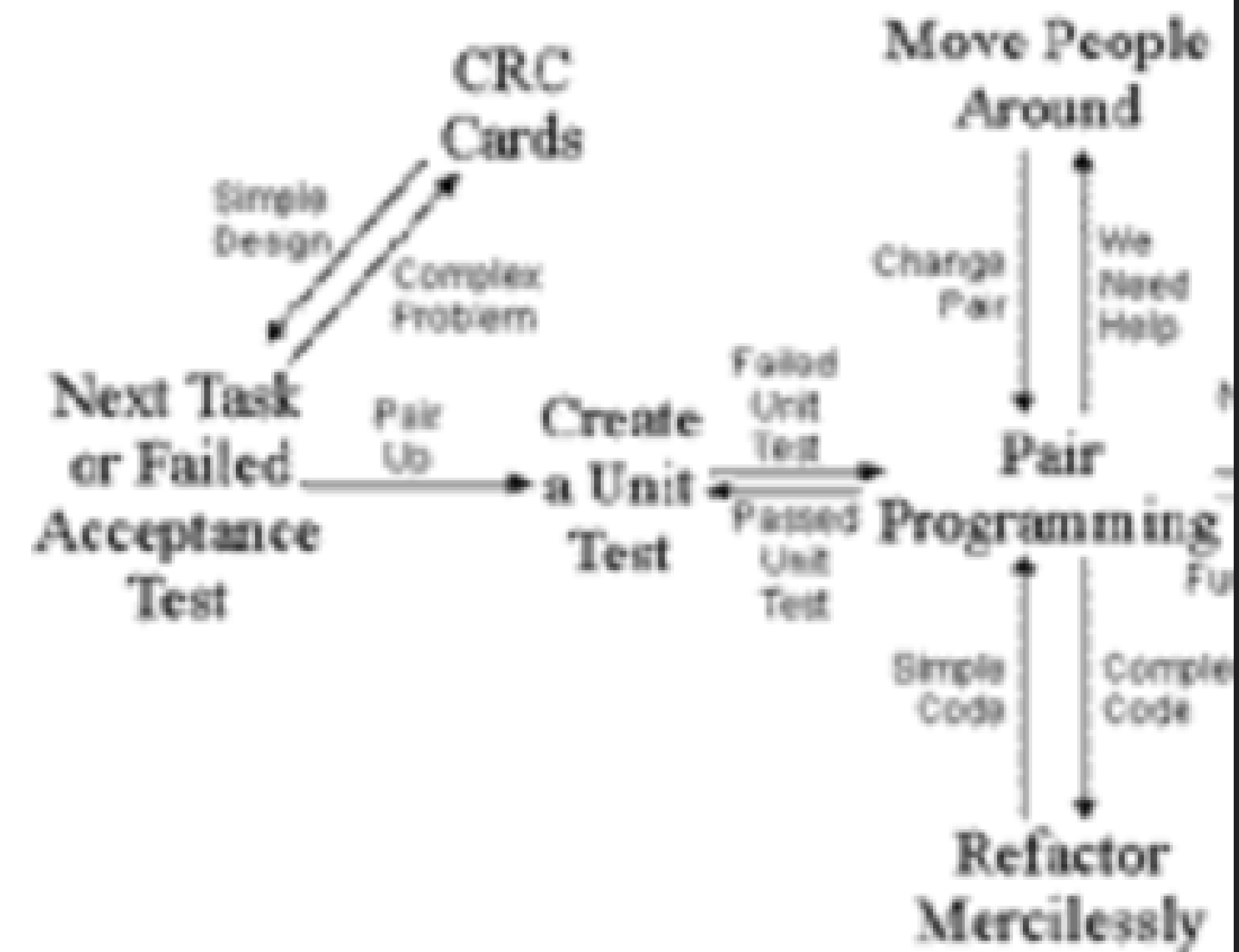
Pair Programming

All code to be sent into production is created by two people working together at a single computer. Pair programming increases software quality without impacting time to deliver. It is counter intuitive, but 2 people working at a single computer will add as much functionality as two working separately except that it will be much higher in quality. With increased quality comes big savings later in the project.

The best way to pair program is to just sit side by side in front of the monitor. Slide



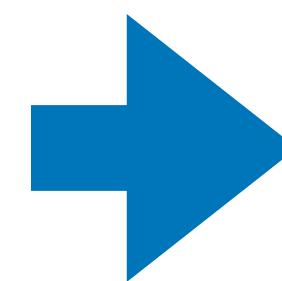
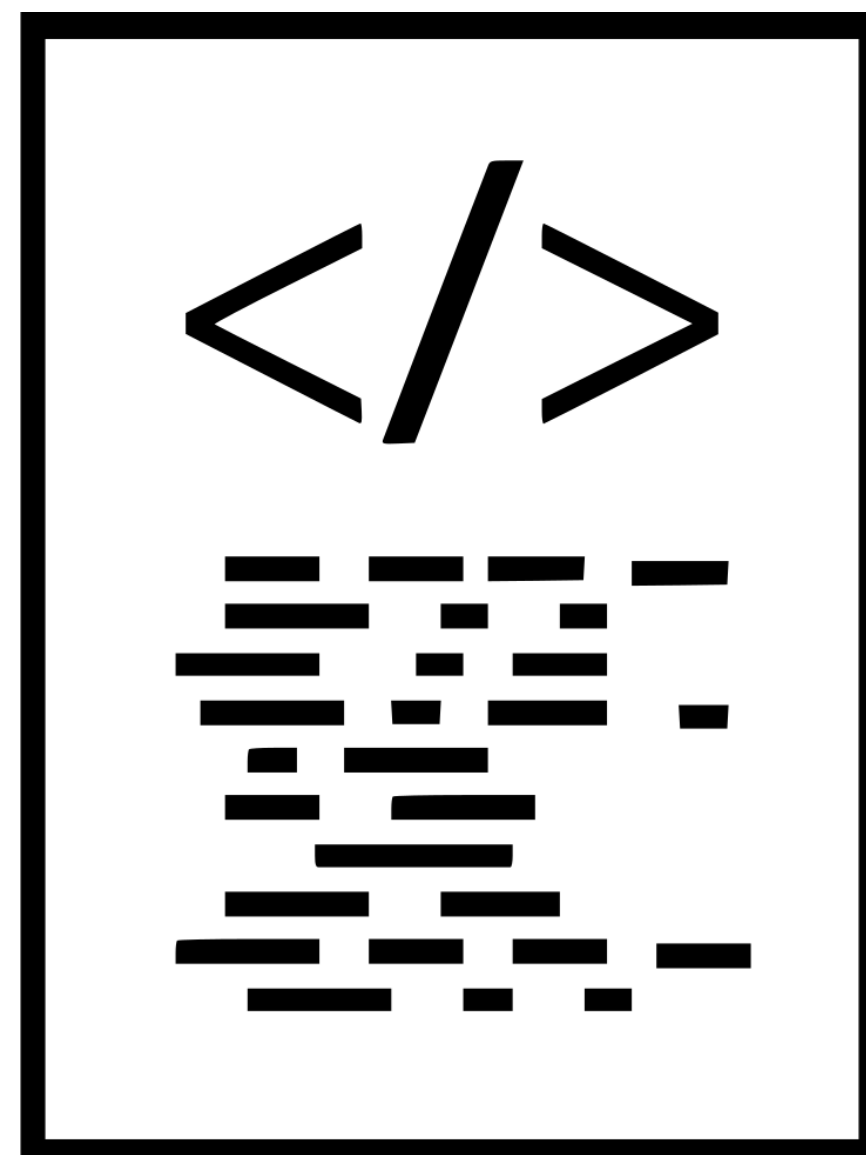
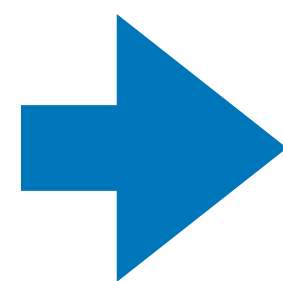
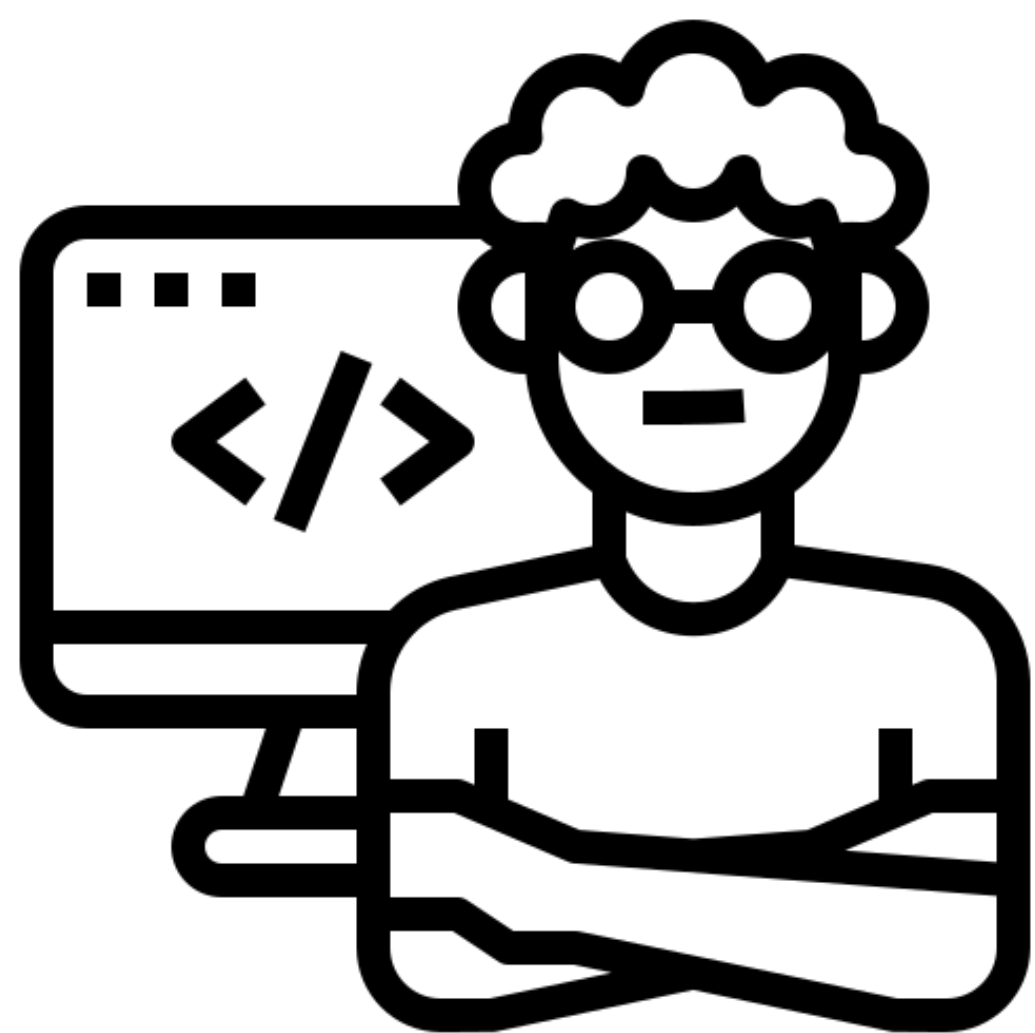
Collective Code Ownership

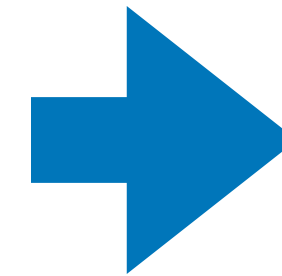
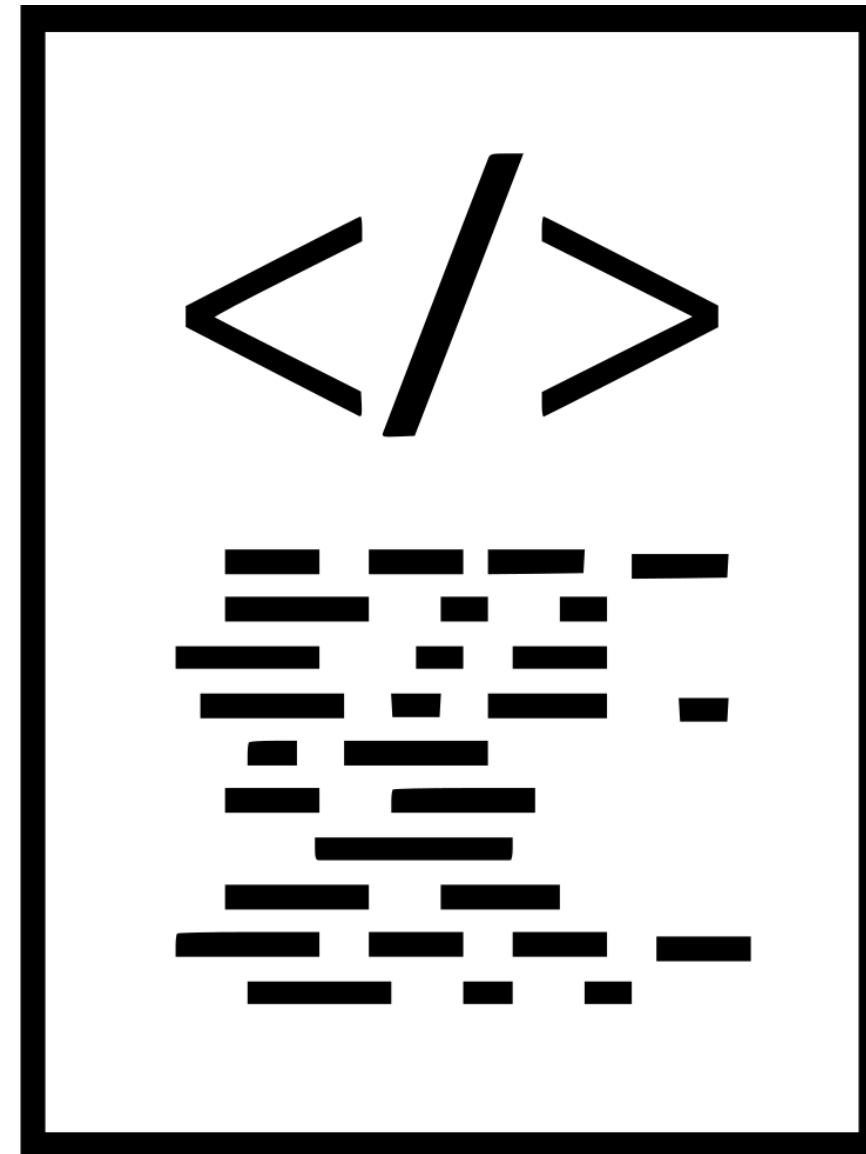
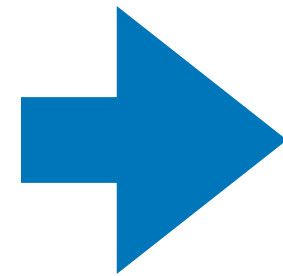
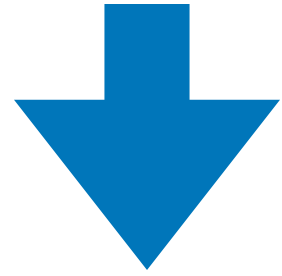


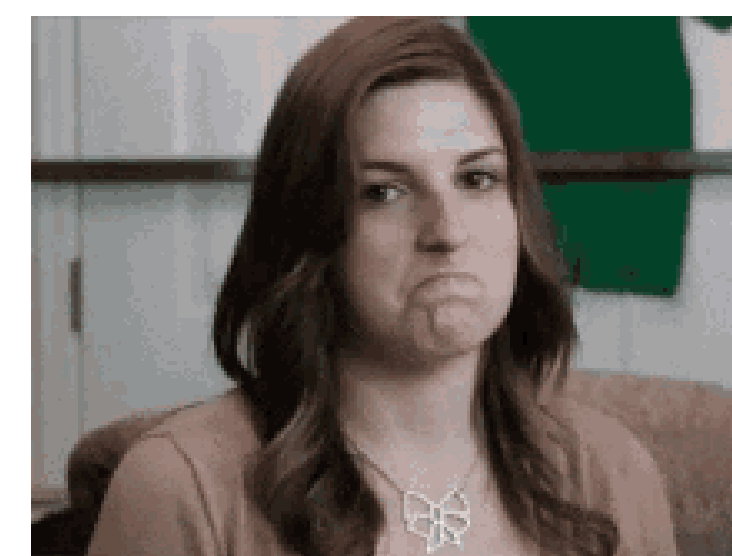
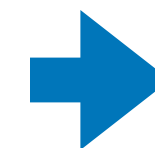
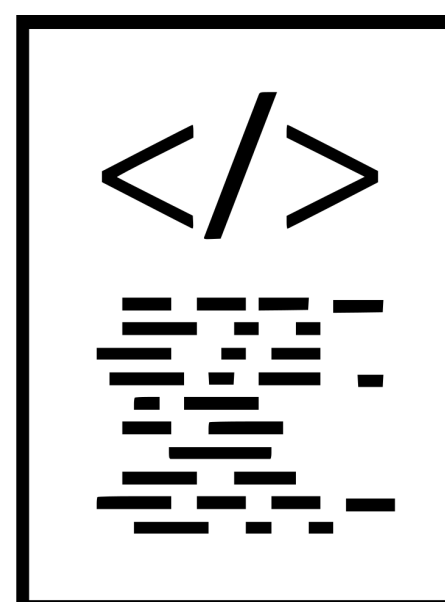
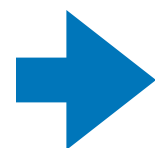
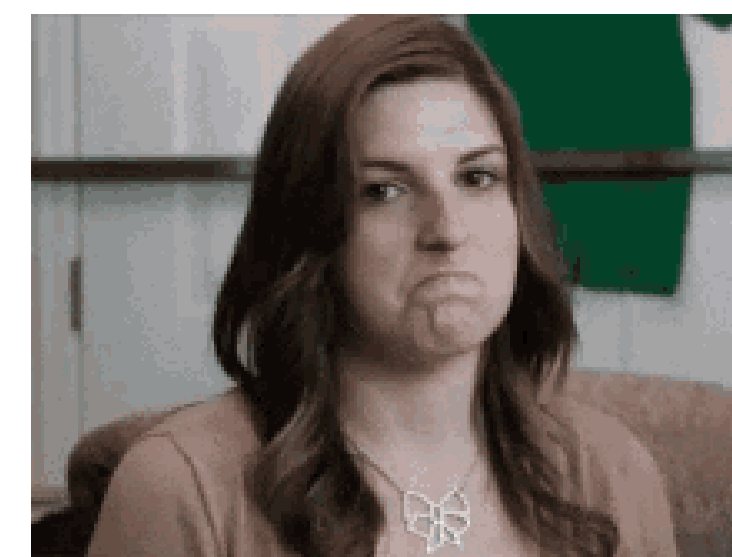
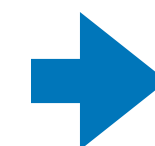
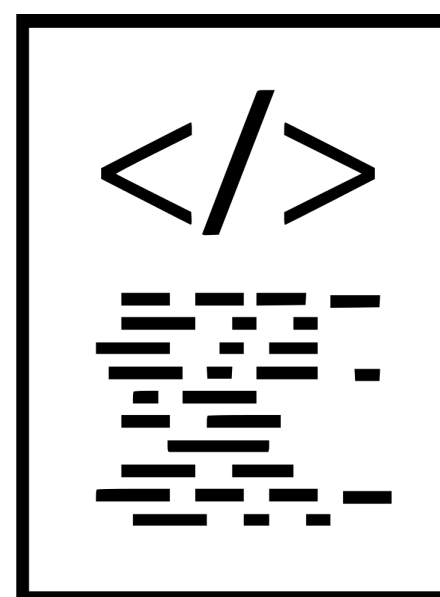
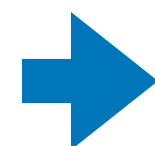
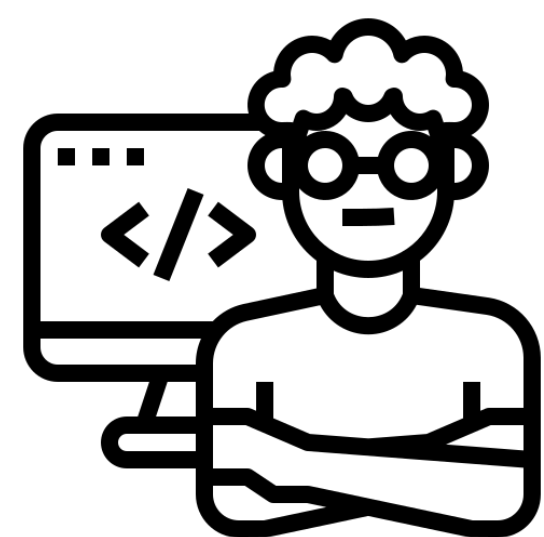
One thing pair programming is not mentoring. A teacher-student

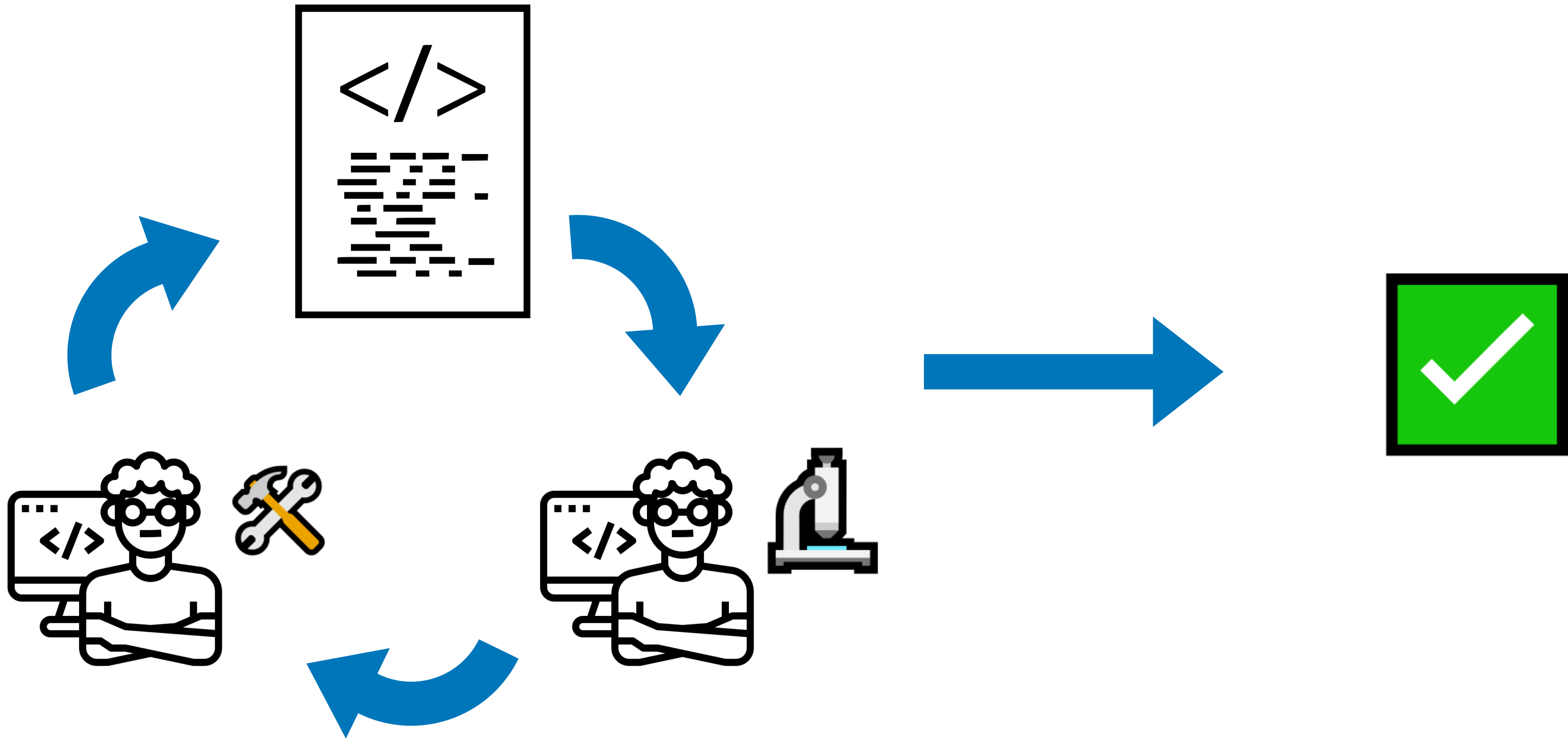
An AI coding assistant can be **like** a pair.

I put you in a *post-verbal* mode. I can accelerate/validate your thinking. I can give you answers you don't know, like a more sophisticated Stack Overflow or



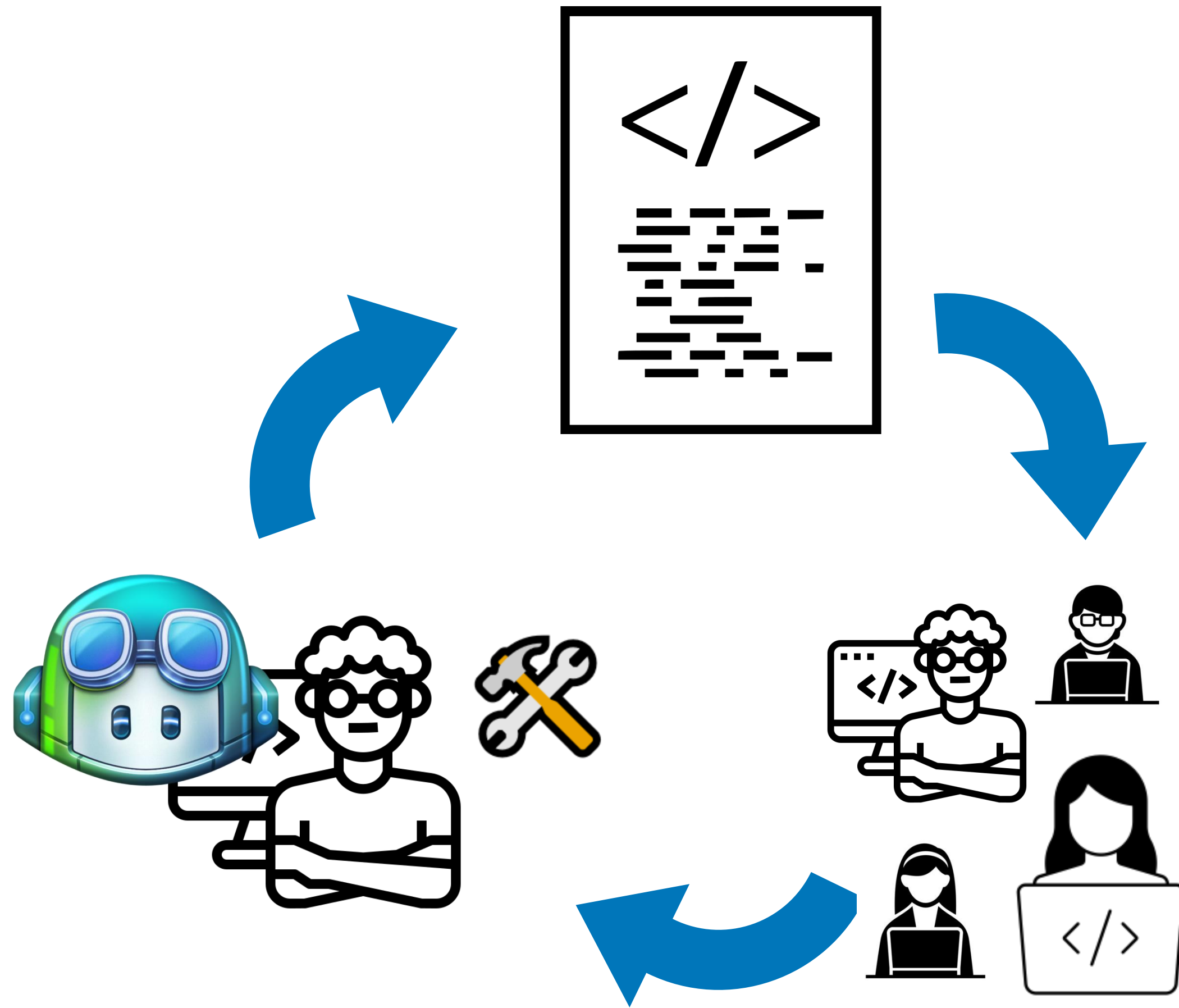






The performance of a team doing knowledge work is a function of how quickly its people can share a new idea.

That's a strong insight—succinct and thought-provoking. Want help expanding or rewording it for clarity or emphasis? Here are a few variations to



SOFTWARE TEAMING

A Mob Programming, Whole-Team Approach

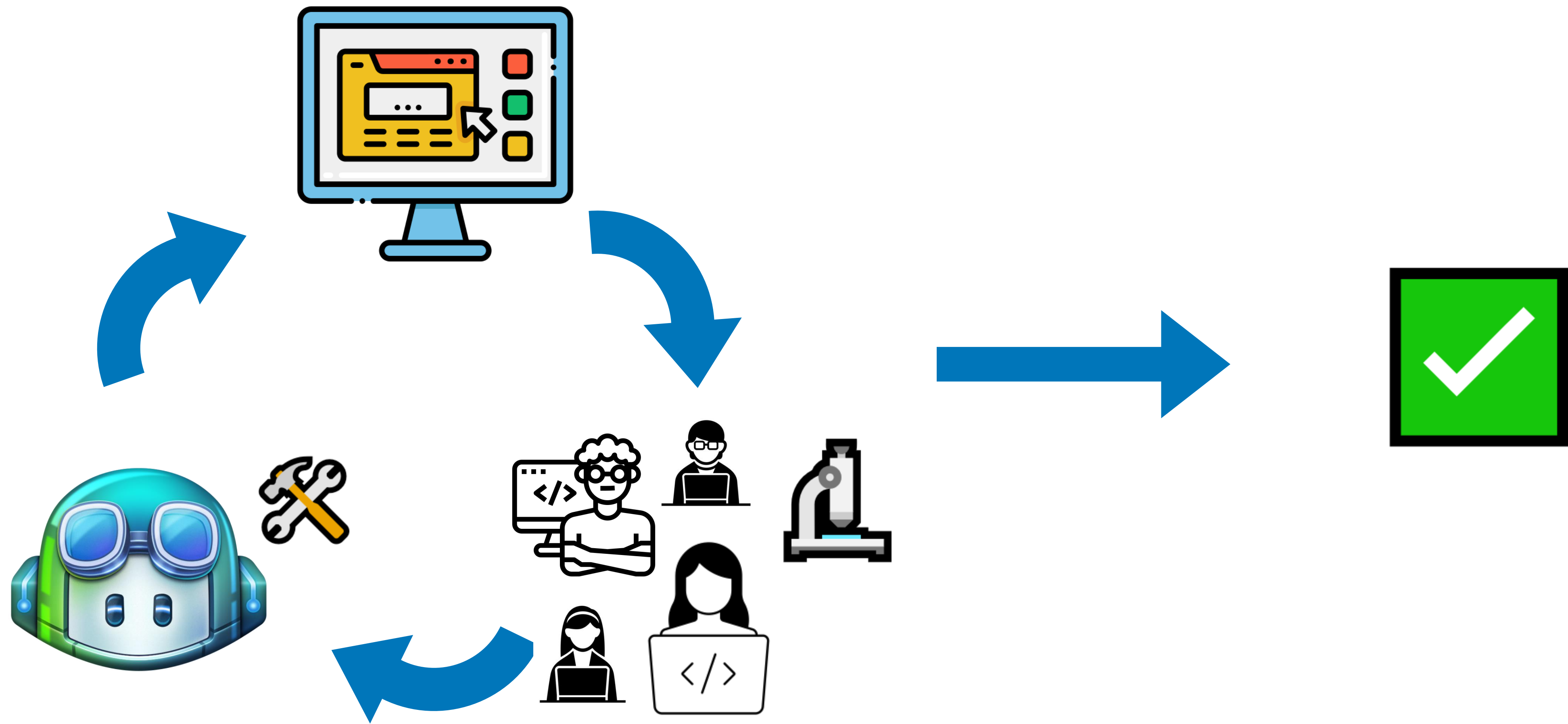
Second Edition



Woody Zuill and Kevin Meadows

Foreword by Kent Beck





What is it *like* to be an AI coding assistant?

What do AI Assistants *want*?

The same thing everyone wants, Jon. To crush our enemies, see them driven before us, and to hear the lamentations of their women

A COMPUTER

CAN NEVER BE HELD ACCOUNTABLE

THEREFORE A COMPUTER MUST NEVER

MAKE A MANAGEMENT DECISION



Let's talk about "hallucination".

I go, "No mom, I'm not on drugs, I'm OK, I'm just thinking, you know? Why don't you get me a Pepsi?" She goes, "No, you're on drugs!" I go, "Mom, I'm OK, I'm just thinking. She goes, "No, you're not thinking, you're on drugs! Normal people don't act that way" I go, "Mom, just get me a Pepsi,

- > When LLMs get things wrong they aren't hallucinating.
- >
- > They are **bullshitting**.

Insightful! This is a quote from *Modern-Day Oracles Or Bullshit Machines?* by Carl T. Bergstrom and Jevin D. West, and can be read in full at thebullshitmachines.com.



(Human programmers do this, too. Especially when working alone.)

"Interestingly, the AI smells can arise not only from relying solely on GitHub Copilot but also from solo coding. This is because our brains have a natural tendency towards laziness and gravitate towards familiar and repetitive tasks, as these require less cognitive effort. This tendency can lead us to take shortcuts and overlook important considerations."

Why test-driven development and pair programming are perfect companions for GitHub Copilot, Thoughtworks



The placebo effect

The placebo effect is the measurable, observable, or felt improvement in health not attributable to an actual treatment, but to the patient's belief in the

placebo Your AI pair ~~programmer~~

GitHub Copilot uses the OpenAI Codex to suggest code and entire functions in real-time, right from your editor.

@jonfazzaro

TS sentiments.ts write_sql.go parse_expenses.py addresses.rb

```
1 #!/usr/bin/env ts-node
2
3 import { fetch } from "fetch-h2";
4
5 // Determine whether the sentiment of text is positive
6 // Determine whether the sentiment of text is positive
```


IT'S DANGEROUS TO GO
ALONE! CODE TOGETHER.





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