

AI Collaboration Lab

for Software Developers

Participant Workbook - v1

This workbook is for active use.

Capture what you notice, what changes, what AI reveals, and what you want to practice next. The value is not in filling every blank. The value is in preserving enough evidence to learn from the way you work.

How to Use This Workbook

- Use it during the Lab, not only afterward.
- Write down observations before trying to make them polished.
- Save useful AI transcript excerpts when the exercise asks you to preserve evidence.
- Return to the field artifacts after the Lab and adapt them to your real work.
- You do not need to fill every blank. Capture the moments that teach you something.

The Lab at a Glance

Studio	Capability	Field artifact
1 - SEE	Separate before solving. Notice assumptions and problem-framing jumps.	Four Conversations Field Log
2 - THINK	Discover through dialogue. Stay in the conversation long enough for design to change.	Discovery Conversation Transcript
3 - DESIGN	Shape for verification. Use testability as a lens for good design.	Testability Review Card
4 - BUILD	Think together. Coordinate humans, AI, intent, evidence, and small increments.	Collaboration Protocol
5 - REFLECT	Learn how you build. Study traces and choose the next practice.	Personal Learning Loop

Core Practices

- Experience before explanation.
- One awakening per Studio.
- AI is a participant in the work, not a separate tool demonstration.
- Debriefs extract the lesson from the experience.
- Each Studio produces a reusable practice artifact.

Personal Baseline

Before We Begin

What do I currently use AI for in development work?

Where do I feel most confident collaborating with AI?

Where do I feel least confident or most skeptical?

What would make this Lab valuable for me?

Studio 1 - SEE: Seeing Before Solving

Separate before you solve.

Awakening

I thought I understood the problem. I now see how quickly I jump to solving before I have separated the conversations.

The Four Conversations

Conversation	Question
Behavior	What should happen?
Meaning	What does the business mean?
Mechanism	How can I make it happen?
Structure	What wants to stay together?

What This Studio Is About

Studio 1 helps you experience how easy it is to collapse problem, meaning, implementation, and design into one conversation. Good engineering begins by seeing which conversation you are actually having.

Before	After
I solve problems.	I discover problems before solving them.

During the Studio

- Build or reason about a shopping cart from limited instructions.
- Notice the assumptions you made without being told.
- Compare your assumptions with other participants.
- Separate behavior, meaning, mechanism, and structure.

Exercise Instructions

1. Read the exercise prompt.
2. Work individually first.
3. Capture the problem you believed you were solving.
4. Join the breakout discussion and compare assumptions.

5. Return to the main group for debrief.

What I Notice

What problem did I think I was solving?

What assumptions did I make?

What did other people assume differently?

Debrief Notes

Which question would have changed my design earliest?

Which conversation do I tend to collapse into implementation?

What did AI amplify or assume?

Field Artifact

Use the Four Conversations Field Log to slow the jump from vague intent to implementation.

Behavior:

Meaning:

Mechanism:

Structure:

Assumptions I should name earlier:

Field Experiment

Before the next Studio, notice one moment where you or AI jumps straight to implementation. Write down what conversation was skipped.

Studio 2 - THINK: Discover Through Dialogue

Better software emerges through better conversations.

Awakening

I thought better AI work meant better prompts. I now see that discovery happens through sustained dialogue.

What This Studio Is About

Studio 2 uses a Password Validator kata to show how requirements, design, and understanding change when you stay in the same AI conversation instead of treating the first response as the answer.

Before	After
I ask AI for answers.	I think with AI through iteration.

During the Studio

- Begin with a one-prompt constraint.
- Continue the same conversation as requirements change.
- Watch what AI assumes and what you assume.
- Practice expert dialogue by asking, challenging, refining, and resetting.

Exercise Instructions

6. Use one prompt first and observe the result.
7. Continue the same AI conversation as new password requirements appear.
8. Keep notes on questions that change the design.
9. Save a transcript excerpt that shows discovery happening.

What I Notice

What did my first prompt leave ambiguous?

What assumption did AI make?

What question changed the conversation?

Debrief Notes

When did the conversation become genuinely useful?

Did AI convince me of anything? Did I convince AI?

What changed in the design because I stayed with the conversation?

Field Artifact

Use the Discovery Conversation Transcript to preserve the turns that changed your thinking.

Initial prompt:

AI assumption I noticed:

Question that changed the design:

Requirement that forced a rethink:

Transcript excerpt to keep:

Field Experiment

Choose one programming task. Continue the same AI conversation for at least three meaningful iterations before deciding on a design.

Studio 3 - DESIGN: Shape for Verification

Design is the shape that makes behavior verifiable.

Awakening

I thought testability was something I added after design. I now see testability is how design becomes visible.

The Three Design Virtues

Simple	Composable	Testable
One twist. One idea you can understand alone.	Pieces keep integrity when combined.	Behavior can be independently verified.

What This Studio Is About

Studio 3 uses discount and pricing policies to make design pressure visible without starting in code. You use tests and assertions as mirrors for simplicity, composability, and independent verification.

Before	After
Tests check my code.	Tests reveal the shape of my design.

During the Studio

- Identify independent behaviors in pricing policies.
- Notice where requirements become interdependent.
- Use the Mirror Test to evaluate whether a test reveals one behavior.
- Ask AI to stay at the behavior and design level before writing code.

Exercise Instructions

10. List behavior examples for independent pricing policies.
11. Name what each example proves.
12. Classify tests as clear mirrors or blurry mirrors.
13. Use AI to explore simple, composable, testable design shapes.

What I Notice

Which behavior was easiest to verify independently?

Which requirement made verification ambiguous?

Where did setup cost reveal design friction?

Debrief Notes

What does a good test mirror?

Where did AI simplify the design?

Where did AI preserve or increase coupling?

Field Artifact

Use the Testability Review Card before asking AI for implementation.

Behavior to verify:

Expected result:

What one test should prove:

What would make the test blurry:

Design boundary this suggests:

Field Experiment

Choose one real feature or change request. Create a Testability Review Card before asking AI for code.

Studio 4 - BUILD: Think Together

Building with AI is shared cognition, not delegation.

Awakening

I thought building with AI meant delegating work. I now see building is coordinating shared understanding among people, tests, code, and AI.

Mob Roles

Role	Keeps asking
Navigator	What are we trying to make true? Human-only.
Shepherd	What does AI need to know now?
Verifier	What evidence proves this works?
Driver	What is the smallest useful next step?

What This Studio Is About

Studio 4 turns AI into an active participant in a human mob. Humans rotate roles every five minutes while AI is assigned a useful role for the next increment. The goal is shared understanding, not merely speed.

Before	After
AI helps me build faster.	We coordinate intent, evidence, code, and AI.

During the Studio

- Work in four-person online mobs.
- Rotate Navigator, Shepherd, Verifier, and Driver every five minutes.
- Assign AI a role such as Driver, Verifier, Critic, Questioner, Summarizer, Proposer, or Shepherd.
- Build a Kanban/task-board feature through small verified increments.

Exercise Instructions

14. Name human roles at the start of each round.
15. Before AI acts, name intent, evidence, and AI role.
16. Take one small action.
17. Capture what changed.

18. Rotate on the facilitator's signal.

What I Notice

When did the team have shared understanding?

When did one person or AI run ahead of the group?

Which AI role created the most value?

Debrief Notes

What changed when AI knew the why?

Which protocol step prevented drift?

What evidence did the team actually trust?

Field Artifact

Use the Collaboration Protocol to make team AI work explicit and repeatable.

Before AI acts, we will:

AI roles we should use more often:

Drift signals to watch for:

Recovery move:

Small verified increment definition:

Field Experiment

Use the Collaboration Protocol on one real team or solo task. Bring back one transcript excerpt, one smallest verified increment, and one moment where AI helped or hindered thinking.

Studio 5 - REFLECT: Learn How You Build

Use the traces of work to improve the next collaboration.

Awakening

I thought reflection was something I did after the work. I now see the work leaves evidence I can use to improve how I think, collaborate, validate, and learn.

Transcript Archaeology Labels

Label	Meaning
CLARITY	The problem, intent, or next step became clearer.
ASSUMPTION	A belief entered the work without being named or tested.
DRIFT	The conversation moved away from the actual goal or evidence.
LEAP	Someone jumped ahead faster than shared understanding could support.
MIRROR	A question, assertion, test, example, or summary reflected understanding back to the team.
RESET	The team restored context, restated intent, summarized decisions, or narrowed the next move.
INSIGHT	The trace revealed a reusable lesson about how the participant or team thinks.

What This Studio Is About

Studio 5 brings the Lab together by reviewing transcripts, tests, design decisions, and collaboration moments as evidence. The goal is a self-learning loop that compounds.

Before	After
I use AI to get outputs.	I use traces of human-AI work to improve the next collaboration.

During the Studio

- Mark an AI transcript using Transcript Archaeology labels.
- Review traces for drift, assumptions, leverage, and mirrors.

- Choose one micro-habit to keep.
- Reflect on the kind of developer you are becoming.

Exercise Instructions

19. Read the transcript silently.
20. Mark two to four moments using the labels.
21. Review one trace bundle in a breakout group.
22. Identify one moment of drift and one moment of leverage.
23. Choose one next experiment.

What I Notice

Where did the conversation become clearer?

Where did an assumption enter without being tested?

What restored clarity?

Debrief Notes

What kinds of mirrors created leverage?

Where did AI amplify understanding?

What practice would compound if I used it every day?

Field Artifact

Use the Personal Learning Loop to turn AI collaboration into deliberate practice.

Moment of drift:

Assumption or leap:

Moment of leverage:

Mirror that helped:

Micro-habit to practice next:

Field Experiment

Choose one real AI collaboration and save the trace. Spend ten minutes reviewing it with the Transcript Archaeology labels.

Reusable Field Artifacts

These are the short-form artifacts to reuse after the Lab. They also work as downloadable bonus cards.

Four Conversations Field Log

Situation	Conversation I was having	Conversation I needed

Discovery Conversation Review

- Question that changed the conversation:
- Assumption AI made:
- Assumption I made:
- Requirement that changed the design:
- Transcript excerpt worth keeping:

Testability Review Card

Prompt	Notes
Behavior to verify	
Expected result	
One reason this test should fail	
What would make this test blurry	
Design boundary suggested	

Team AI Collaboration Protocol

- Before AI acts, name intent, evidence, AI role, and smallest verified next step.
- Rotate human roles when working as a mob.
- Use AI as Verifier, Critic, Questioner, Summarizer, Proposer, Shepherd, or Driver intentionally.
- When drift appears, summarize the trace and restore context.
- After the session, choose one micro-habit to keep.

Personal Learning Loop

Loop	Practice
Before	Name outcome, constraints, evidence, and AI role.
During	Ask AI to expose assumptions, summarize context, critique options, or verify evidence.
When stuck	Reset intent, knowns, unknowns, and smallest next step.
After	Review the trace for drift, leverage, mirrors, and one next experiment.

Personal Practice Plan

My 30-Day Practice Plan

One Lab practice I will use this week:

One real work situation where I will apply it:

One trace I will preserve:

One person I can share this practice with:

How I will know the practice helped:

Bonus and Continued Learning Options

The AI Collaboration Lab is the hub. These related topics can become follow-on labs, team enablement sessions, or self-study bonuses.

- AI Development Environment Setup: knowledge bases, CLAUDE.md, repository context, and team conventions.
- AI-Assisted TDD and Verifiability: using tests and assertions as mirrors for design.
- Legacy Code Refactoring with AI: characterization, seams, risk reduction, and small verified changes.
- Team AI Collaboration Protocols: adapting mob roles and shared AI practices to real teams.
- Personal AI Development Methodology: defining a durable individual working style with AI.
- Prompt Studio Workflow Automation: integrating complex reusable workflows into developer practice.

Final Reflection

Who I Am Becoming

Before this Lab, I believed:

Now I notice:

The practice I want to keep is:

The kind of developer I am becoming is: