

Workshop: Vibe Coding in Pairs

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1. Abstract

Proposal: A 1-hour, 2-part interactive workshop encouraging reflection and ideation on the realities of coding with LLMs. In the first part, participants complete a programming task in pairs with an agentic coding assistant (ACA) such as Claude Code or Cline, or a tool of their choosing. Programming in pairs offers two benefits: (1) it accommodates for varying levels of coding skill, as less experienced participants can collaborate with more experienced ones, and (2) it creates a more interactive environment and more opportunities for discussion as participants can voice observations they made about their partners' experiences. During part 2, participants discuss their experiences with joint goals of highlighting the challenges faced during the activity, as well as brainstorming blue sky solutions to those challenges that capture what the group as a whole envisions as the future of programming.

2. Format

2.1. Part 1

The coding activity is meant to be fun, particularly for completing in pairs, outside the realm of typical SWE work, and easy enough to be completed within 30 minutes. Participants will be given three options and near total creative freedom to produce some output that responds to the prompts below.

- **Option 1 (Visual):** create an interactive, generative sketch using [p5.js](#) (or a similar web-based framework). For example, the user controls precipitation on an alien planet using their mouse and keys and watches generative plant forms take shape in response. Alternatively, take inspiration from the [p5.js community library](#).
- **Option 2 (Audio):** create an interactive, generative web-based instrument using [Tone.js](#). Examples of interactivity could include using a mouse or trackpad to simulate a [theremin](#). By 'generative' we mean that the tool/instrument should incorporate some unpredictability by design. For example, if you're creating an interactive theremin, an algorithm could modulate the sound envelope or add [effects](#).
- **Option 3 (Bonus):** for participants who don't feel sufficiently challenged by the above options, this task asks you to combine the above two options. Using the examples given, one option could be to give both rain and plant life unique sounds that modulate as the plants grow.

More examples may be provided at the beginning of the workshop, but the goal is just to build something interactive and generative in nature, using LLMs and a library most participants won't be intimately familiar with, and to have fun doing it.

2.2. Part 2

The second half of the workshop will be guided, open discussion on the pairs' experiences using LLMs for creative coding. The researcher will pose some questions to generate discussion, but the goal is to reflect on the benefits LLMs provide for learning and creative tasks, as well as how current ACAs can be better designed to align with users' needs and goals. Example discussion questions:

- Those of you for whom this was the first time using [p5.js](#) or [Tone.js](#), to what extent did you come away from that exercise feeling like you learned something about those libraries?

- What exactly about (a) how the LLM communicated, (b) how the ACA you used is designed, or (c) how information is presented in its UI felt like it contributed to or hindered learning?
 - How important do you think learning is for a scenario like this?
 - For situations like this where learning the underlying language and frameworks has little bearing on your success in your day job, what is the bare minimum that LLMs and ACAs should do to foster understanding and prioritise learning?
 - * What's different when it comes to your own work?
- Was there anything you felt you wanted more control over? Anywhere the LLM felt like it was overstepping its boundaries?
 - For the less experienced coders, was there anything you saw a more experienced programmer doing that you would not have thought to do yourself? Anything you felt like you learned or took away from seeing someone more experienced interact with an ACA?
 - For the more experienced coders, was there anything you saw less experienced programmers doing that you would consider to be less-than-ideal practice?

2.3. Participants

Ideally 8-16 participants. Open to anyone except total beginners. A growing body of research shows that novices and expert developers may really be impacted by the same UX issues, but that they are compounded for novices. However, for the purposes of workshop efficiency, participants should be familiar with the basics of coding (e.g., how to install packages, what a 'for' loop is, etc.) and should have some experience with ACAs.

2.4. Equipment

Ideally a large screen to present on / allow all participants to observe the same content or interactions at the same time, as well as a whiteboard or sticky notes to jot down ideas. Participants should have their own personal laptops on which to code or use collaborative tools like Figma or Miro. Ideally for coding participants would have access to a Claude subscription in order to use Claude Code, or something comparable. However, as a fallback, we can see how far we can get on Cursor's or Windsurf's free tier, or see if participants are willing to sign up for Cursor Pro's 7-day trial. The last resort would be using Google AI Studio, which has a generous free tier but is not a true ACA.

3. Goals + Expected Outcomes

The goal of this workshop is, first and foremost, to have fun, hence the creative, abstract nature of the activity, and working in pairs on something silly and open-ended is more enjoyable than working solo and can generate richer discussion. The more serious goal is to use that shared experience as a catalyst for collective reflection. The discussion in the second half gives participants a chance to pool their observations and frustrations about coding with AI into a blue-sky conversation about what better-designed tools might look like. For myself as the researcher, I expect the session to serve as inspiration on where to take my research next, rather than it resulting in concrete data to use in a research study.