

Random Thoughts on Researching with AI

Jiong Chen

August 24th, 2026

Abstract

Many of us are living through some version of an existential crisis brought on by rapidly evolving LLMs and AI agents. These notes record my thoughts as I struggle with it. Faced with the meaningless toil, one can, per Camus, acknowledge the truth and commit anyway, yet this approach has always struck me as too passive. I keep wondering if a more active response is possible: not merely enduring the intellectual erosion, but pushing outward into the ground LLMs haven't reached. I'm nowhere near an answer though.

These are memos to myself, reminders to avoid the two failure modes that by now are evident enough: stubbornly clinging to outdated workflows at the expense of productivity, or mindlessly abusing these new tools to produce little of value.

1

Embrace AI tools as much as you can, try them everywhere in your work and life, and push hard to find their edges. They have dramatically lowered the cost of turning raw intent into a structured, iterable output: the paper draft, the codebase, the diagram, the plan, the report. The hours you save may not go toward groundbreaking ideas immediately, and in fact they do not have to. Use them to rest, to read, to think, to wander, to create room for the serendipity that sparks breakthroughs.

2

Computer science was already in the middle of a publishing boom; LLMs have poured fuel on it. In math derivation, information collection, coding, idea generation, experiment design, and data processing, AI agents already outperform many of us. As these models scale, they will continue to harvest the low-hanging fruit at an accelerating pace, further marginalizing average researchers like me.

The resulting flood is visibly eroding the foundation of academia. A popular saying on Chinese social media perfectly captures the moment: *if you learn slowly enough, there is a lot you never have to learn at all*. It's a joke, but it's also a harsh reality in which much of what demands your attention today will be obsolete tomorrow before you even get to it. The same logic applies to the production side albeit in reverse: if you publish fast enough, much of your output simply won't be worth taking seriously.

That is not entirely a bad thing; after all, nothing new gets built until the old model collapses. Inevitably, the value of research and the qualities we look for in researchers are thrown back into question: what makes a paper or a proposal worth writing, how we measure the novelty and significance of research work, whom we want to hire, and what makes an intellectual pursuit worthy of lifelong devotion. Well, the answer could always be "let capital decide and see where it goes". But I hope that's not the whole of it, or even most of it.

3

The step change rarely goes to those who merely have access to a new technology, and certainly not to those who refuse it and fall behind. It goes to those who *reorganize, or even rebuild, their skills, habits, and ways of thinking and learning around it*.

AI tools are not meant just for doing old tasks faster and stacking increment on increment. We should use them to reinforce the creation process itself. That may start with becoming *unusually sensitive* to whatever feels messy, inconvenient, repetitive, or simply ugly. Innovation seldom begins with a general awareness that something is fundamentally wrong and a shared demand for something new. More often, it begins because a few people (very often just one) refuse to accept even a tiny flaw that everyone else either cannot see or has learned to live with. Generative AI sharply lowers the cost of acting on that refusal. But the lower cost only pays off if you grow more exacting, and picky, not if you make peace with everything already in place.

4

Anything fully formalized, documented, and backed by consensus is already cheap, or soon will be. And work built only on that base will be cheap along with it. Great research, and creation more broadly, draws its meaning from a position no one else occupies, born of an instinct to cut against the current, of intuitions you cannot yet put into words, and of a willingness to be misunderstood and dismissed. That matters more, not less, as generation becomes effortless.

The source of such a position is decades of life that cannot be copied and pasted: the schools you attended, the lectures you happened to sit in on, the books you admired, the art you loved, the people you met, the pain you carried, the dreams you had, the confusions you wrestled through. All of it settles into a way of seeing that sooner or later shapes the work — and it should! No thread is unusual on its own. What is unique is how they cross.

So keep your distance from the crowd moving in lockstep. Take your own peculiarities seriously. Notice what sets you apart, and sharpen it rather than sand it down.

5

As generators grow more capable, the work of research shifts. The hard part is no longer producing something that functions; it is judging what has been produced, positioning it precisely in the history of the field, and reliably discerning whether it creates new knowledge. This shift deserves to be taken far more seriously than it has been.

Judgment draws not only on knowledge but on taste. You may already have instincts for which topics are intellectually soft, which problems are unimportant or entirely manufactured, which methodological routes have no vitality and no room to grow, and which solutions are technically correct but touch nothing fundamental. Cultivating that internal discriminator is where an intellectual aesthetic begins, and more often than not, it is this aesthetic that sets the ceiling on what you can reach.

Chasing whatever is popular and getting swept up in every new wave of hype is, in essence, a sign of the absence of any genuine interest. When anyone can generate ideas and noise without limit, what distinguishes you is what you dislike and refuse; serious thought begins in prejudice.

6

E. H. Gombrich famously opens *The Story of Art* with a provocative assertion: “There really is no such thing as Art. There are only artists.” His intent was to dispel the mystique surrounding high Art and to puncture the elitism it implies. My own reading runs a bit differently: an artwork can never be fully understood apart from the person who made it. Every piece is a mirror of the artist’s idiosyncratic perception of the world – how they observe light and shadow, feel motion and stillness, and struggle with their own sanity and madness. Science is not much different.