

AI

Chris Paciorek

2025-08-25

Table of contents

we're all now confronting the challenge of how to effectively use AI for coding but here we are also having to consider how to effectively use (and whether to use) AI when we're learning about writing code and learning about computing more generally

I don't have any better idea than you do about where things will be in a few years, nonetheless in 5-10 years when you'll be well into your careers

probably a lot (all?) of the code you produce will be AI generated

and at some point it may even be good enough that you don't need to be able to understand it in detail or debug it, and that the number of people writing and debugging code will be many fewer than right now

but the assumption for now is that even if we don't generate all our code manually, we need to understand the code conceptually and in detail (in most cases) and be able to test, debug, extend, and update it

some of our challenge (in particular mine) is trying to figure out what details you need to understand and which are/will be done primarily by AI (e.g., regular expressions, plotting)

to that end, I don't think that relying heavily on AI to do the work in the course is going to give you the skills you'll need for the near-ish future. I.e., if you rely on AI to write your code for you, I don't think you'll be able to debug and extend it effectively or to understand computing concepts more generally. Neither Joao or I is going to be the AI police trying to assess how much you've used AI on your problem sets, but you should think carefully about how you use it.

Much of the assessment will be in class; I don't think this captures fully what you have learned (to the extent course assessment ever really does), and I'd rather have more of the assessment be based on out-of-class work without time pressure and with more in-depth questions/thinking, but that doesn't seem realistic any more.

Question 1:

pause - talk to neighbor - have you used AI for help with coding and to generate code; if so, what chatbots or AI coding assistants have you used, how well has it worked; how "big" are the tasks you've had it do?

Question 2:

What has worked well in terms of how you've used AI to help learn coding or about computing?

What has not worked well or seems unhelpful/dangerous in using AI when learning to code or about computing