What to Do if You're Young and in Trouble

The title is a bit misleading because it suggests that if you're young, there's a possibility you might not be in trouble. I think that's optimistic, and in fact, if you're young right now, you are already in trouble.

We are entering a world in which most white-collar labor is already, or will very soon be, automated. Interns are good examples of this. Interns usually do boring work, things like Excel and rudimentary research tasks. As it turns out, AI can already do those things, and often faster, cheaper, and with fewer errors than a bored, sleep-deprived intern. So the question then becomes: why do we need interns?

The easy answer is that we don't. This logic extends far beyond interns. I think it applies to all entry-level work. There's a fairly positive relationship between skill and years at a job. If you work more years, you become more skilled. Most people agree with this. With that thesis comes the implication that more skill also equates to being able to do more complex work. So, in simple terms: more time worked = more complex work. How does this relate to interns and the entry level?

The reason we don't like the easy answer above is because it steers us into a bit of a paradox. We don't need the entry level for any immediate, practical reason (provided AI can do that work). If this is true, then we should eliminate the entry level and focus on the people doing challenging work. But if we do that, we won't have people to do the challenging work in ten or twenty years. That's a problem, so we need the entry level. We need it, and we don't. It's a partial paradox, and it has a lot of people freaking out.

I say partial because I don't think it's much of a paradox, and I don't think much has changed. The entry level was never valuable because of the immediate value these workers provided. Nobody expects an intern at Meta to do anything remotely impactful in three months. No, the point of these roles is to invest in talent. If that sounds absurdly obvious, that's because it is.

I draw attention to it because I think everyone is terrified about the future of the entry level. And to some extent, they're right. But I'd posit that the entry level has simply gotten more obviously low-value in the short term, and that it doesn't matter anyway because it's always been like that.

So the first point of change is the entry level. It will get slashed, but probably not as much as people think. We still need to protect the future pipeline. More likely, these jobs will mutate into AI-supervision roles. The entry level will be less about producing work and more about managing, prompting, and checking AI outputs.

The second band of jobs is in much worse condition. This is the mid-tier white collar. You do marketing at [insert Fortune 1000]? Congrats! AI does too. And faster. And cheaper. And in many routine tasks, better.

If capitalist virtues of the past are any indication of the future, your CEO doesn't care nearly as much about your job as they do about the bottom line. That doesn't mean every marketing job disappears tomorrow–things like creative strategy, brand positioning, and cultural nuance are still sticky human domains–but most repetitive, measurable, and template-driven mid-tier work is in real trouble.

The third cluster of jobs is output-oriented work. This is my most contentious point. Output-oriented can mean a lot of things. This is what I mean by it:

Any work where we care more about the artifact (output) than we do about how it was generated (input) is output-oriented. There are exceptions that make this rule tricky. Authors, for example. Their artifacts are books. All else equal, we'd probably rather read a book written by a human than by a machine. In either case, though, the artifact has to be good. So here we care about both output and input. Here's a slightly more exhaustive definition: any work where we care more about the artifact than we do about the process, given that the artifact reaches some level of quality, is output-oriented.

Some jobs are easy examples of this type of work. Software engineering is one. If I ask you about a piece of software on your computer, you probably care much more that it works than you do about all the development that went into it. I'd be willing to bet that you've looked up plenty of authors, but not a lot of people who wrote your software.

Software engineering is low-hanging fruit because it is, and already has been to a degree, the first to go. Don't worry, it doesn't stop there. I think almost all types of engineering jobs are next.

My engineering friends often talk about AI shortcomings in their homework. It seems that AI has done much better for me in my code writing than it has for their engineering work. I'm sure that sucks for them. They think it doesn't because they think it means their jobs are safe. If AI can't do it, then we have to! True, but only for now.

If you think AI won't catch up to engineering, then I'd invite you to look at an AI improvement curve and come back.

Here's a quick way to articulate how screwed engineers are:

1. If engineers are output-oriented workers, and AI will be able to do [most] engineering work, then [most] engineers will have no work.
2. Engineers are output-oriented workers.
3. AI will be able to do [most] engineering work.

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Thus, [most] engineers will have no work.

So the third category of people who are screwed are output-oriented workers. I only talked about engineers, but the list is long. Some domains may hold out longer due to safety regulations, liability, or physical constraints, etc etc, but I think it's pretty clear where this is headed.

It wouldn't be a very helpful essay if I just dumped a bunch of cynicism on you, so here's some nicer stuff. One, I think there are plenty of jobs that AI won't touch soon. Two, even if you're young and in trouble (you are), there are lots of ways in which this works out okay.

I think there are a few buckets of work that are particularly safe. They are: human-oriented jobs, jobs in scalable-demand industries, blue collar jobs, and special jobs. There are more of course, but if I were betting on a financially stable future, here's where I'd put my money.

The first type of work is anything valuable because it was produced by a human. In some sense, this is simply the inverse of output-oriented jobs. Here, we care more about some balance of the process and output than we do about just the output.

One example of this might be childcare. If I hire a babysitter to watch my child, I'd probably prefer it to be the teenager next door than an agentic robot I store in my basement. Both the babysitter and the robot achieve the same output: I get some me time, and the kids don't light the house on fire. Yet, I'd still prefer the human. Why? Because in this case, we care about more than just the outcome: we care about trust, empathy, and the human element.

Another example might be restaurants. People love eating at restaurants. Restaurants are more expensive and more time-consuming than eating at home (time ≠ effort). If all we cared about was getting fed, nobody would go to restaurants. So the point of eating out isn't just to satiate ourselves; the food is usually better, we don't have to cook, and it's a social catalyst.

How many times have you had crappy service at a restaurant? You might have had a rude waiter, and probably grumbled about it to whoever you were dining with. That means you cared. Conversely, how many times have you had an incredible waiter and it made the experience that much better? In either case, the human element made a tangible difference in the value of that meal. Thus, we must care about more than just a full belly. We care about human interaction.

These two examples are service-oriented, but the same is true for any sort of human-centric work. Art is another domain. AI can now produce incredible art, better than most humans can in virtually any medium. That said, I hold out hope for art.

To say that artists are screwed is to say that we value art only on its aesthetic qualities. I don't think we do. If you ever wondered why that banana sold for $6.2 million, it wasn't because the buyer was giddy at the sight of decaying fruit duct-taped to a wall, but because it possessed some other incalculable value.[1] If the buyer simply wanted a banana duct-taped to a wall, he could have done it in the comfort of his own home for just over $7. I won't speculate too much on what

that hidden value is in this scenario–the point is that it exists. This additional value is good news for creatives because it means that we don't just care about the fastest or cheapest art. It also means art isn't subject to the same capitalist constraints as most other industries.

That said, commercial art will not survive in the same way. If a company needs an animation for an advertisement or a logo redesign, AI will probably be the better option. This is because the values are different. In this case, cost and efficiency often outweigh human provenance.

The second bucket of jobs I view as safer are ones that occupy what I'd call scalable-demand industries. These are industries where, if efficiency increases, the market can absorb more output without saturating. To understand what I mean, let's contrast with a capped-demand industry.

Take software. Let's say that a new narrow intelligence AI named Bob gets released. Bob is very good at building software, and is five times more efficient than the best human software engineer. So now the software companies look at Bob, and they look at their workforce, and they have two options:

1. Keep their workforce as is, implement Bob, and get five times the output.
2. Reduce the workforce by five times, maintain the same level of output, and drastically reduce costs.

I would wager that most software companies go with option two. This is because in software, we are roughly at equilibrium between supply and demand for most common products. If we suddenly had five times the output, we'd have a surplus, which isn't especially valuable. Thus, the far more likely outcome is to maintain the status quo while cutting costs. That's what makes these jobs less safe.

Now take healthcare and apply the same example. Another narrow intelligence AI named Sam is released. Sam is fantastic at all healthcare-related tasks, and can do everything a doctor can do five times more efficiently. Here, we again have the same two choices: maintain workforce and increase output, or decrease workforce and maintain output. But healthcare is different. For now, we can't really have a surplus of healthcare: demand is constantly high and often unmet. If we can see more patients, detect more illnesses earlier, or perform more procedures, the system benefits from the extra output. That makes workforce cuts less likely, at least until other bottlenecks (insurance, licensing, infrastructure) catch up. That's what makes these jobs safer.

The third bucket is by far the safest for now: blue collar jobs. AI is coming for white collar workers because it's very good at cognitive tasks, and white collar work is largely cognitive. Also, most white collar work can be done on a computer, which doesn't help its case. While we are starting to have commoditized AI, we do not have commoditized robotics. In order to replace manual labor, we need robotics. And robotics is progressing more slowly than AI. So most manual labor is safe, at least for the next ten years or so. Some warehouse and logistics jobs are

already being automated, but highly varied, skill-based trades like plumbing, electrical, or welding are still in the clear. Geoffrey Hinton said it best: "It's going to be a long time" before AI is "good at physical manipulation… So, a good bet would be to be a plumber." In short, if you want to be absolutely sure that you'll have a job, learn a trade.[2]

The final bucket is so small it's probably not even worth mentioning, but I'll mention it anyway: special jobs. This is the incredibly small sliver of humanity driving the development of AI, like researchers at top AI labs and companies. To get here, you probably need to be exceptional in intelligence, motivation, and technical skill. There are also adjacent roles in AI safety policy, auditing, or interpretability that don't require the same level of math or coding depth but still demand exceptional ability.

Where does all of this leave us? First, I think that these jobs I think are unsafe: entry-level positions, most mid-tier white collar roles, and output-oriented jobs. Realistically, that's most white collar work, but I don't want to fearmonger. Second, I think that these jobs are safer: human-oriented jobs, scalable-demand industries, blue collar jobs, and special jobs.

Given all of this, here's what I think you should do if you're young and trying to survive the next couple decades.

First, decide if you genuinely think you could affect AI development. Spoiler: you probably won't, but here's a simple checklist either way:

1. Do you find it interesting?
2. Are you positioned for it? (Do you have the skills, credentials, and network?)
3. Are you willing to try despite the incredibly low odds of success?
4. Are you guided by a moral compass?

If you said yes to all four, you might have a shot. If not, here's what I'd do instead.

If you want the safest option, learn a trade. This might not be realistic for everyone, particularly those already in universities (parental pressure, sunk costs), but it is by far the safest. If you don't want to do blue collar work, then you'll need to be smart. No matter what, you have to be exceptional at what you do. In a world where mundane cognitive labor no longer exists, all that's left is the high level. If you want work, you need to be operating at that level.

Once you've committed to being very good at what you do, pick your domain strategically. Find an industry that is marginally safer than others and double down. And if you have some remarkable talent, lean into it. If you're really good at art, it might still be worth being an artist–not for ad agency gigs, but for human-made artifacts in a sea of AI content. Provenance and uniqueness will still have value.

So, in a final summary: if you are young and don't want to be in trouble, learn a trade, be exceptional at what you do, or create something valuable because it was made by you.

1. https://www.npr.org/2024/11/21/nx-s1-5199568/a-duct-taped-banana-sells-for-6-2-million-at-an-art-auction
2. https://www.inc.com/kit-eaton/a-godfather-of-the-internet-says-you-should-become-a-plumber-heres-why/91203062