

Interview with David O'Connell

Interviewer: Andrew Obwocha

Interviewee: David O'Connell

Andrew Obwocha: So, what's one major AI research trend or technology you believe students or researchers should be paying attention to at this moment?

David O'Connell: For me, it's **agentic AI systems**. I believe they're going to change everything – the way we approach problems and how we transform businesses. They'll be incredibly valuable.

Andrew Obwocha: Agentic AI has been touted as being capable of replacing jobs. How do you feel about that? Do you think that's realistic?

David O'Connell: I don't view it as replacing jobs. I see it as **freeing up people to do more useful work**. I also believe that any of these systems still involve a human in the loop. They become a tool to augment someone's productivity, not to totally replace them

Andrew Obwocha: Okay, alright. Sounds good. Are there any AI field tools or trends that you think are over-appreciated? In reality, they're not necessarily as advanced as people would like them to be. What makes you feel that way?

David O'Connell: I feel that way about the entire **generative AI and agentic field**. They are very advanced, very useful, but I still feel that a person needs to be there to monitor the output and ensure the quality is what you need. So, I think those two questions are related. Saying that this is going to replace people's jobs is not correct. They're going to be very important tools, but they're still tools. People still need to be involved and use them, especially with recent developments in reasoning models over the last nine months.

Andrew Obwocha: With the recent developments in reasoning models, there has been sort of a diminishing returns aspect towards the development of AI. Obviously, as models get more and more advanced, the number of inputs required to get a scalable increase in the value provided by a specific model is becoming less. Essentially, it's a diminishing return. Do you think this is something that can actually scale upwards? Or do you think there's a point where it will just be too many inputs required, too much compute power required to get any benefit from them? Essentially, is there a hard limit?

David O'Connell: That's hard to say. I wouldn't say that's my area of expertise. What I have seen is that there has been some success with **smaller models**. Based on my experience—I'm more of a software professional with an AI background, just for context—I would imagine that you'll see some sort of law that kind of diminishes things, similar to what we've seen in software. But I don't know how to predict that yet because I've

seen some success in taking larger models and shrinking them while still getting good results.

Andrew Obwocha: That's a very common trend actually, like locally run models. Stuff that runs on your phone or on your laptop has made a lot of progress in condensing them down to be smaller. But that's okay, we'll move on now to a slightly different idea. Are there any cross-disciplinary skills that you think have helped you a lot in your software development and AI career? Not necessarily writing code or training models, it could be something like soft skills, psychology, design, ethics, communication.

David O'Connell: Sure, so **soft skills are definitely very important**. One of the things that has gotten me to where I am is just the ability to talk to people and communicate. If you look at skills and think of skills like a traditional business analyst, it's very helpful for all developers to be able to talk to people and understand business problems, understand the value you get from solving them, and understand how to solve them, not just from a technical point of view, but from the point of view of actually creating a solution that's useful to your end users.

Andrew Obwocha: Fantastic. Is there any advice you can give to someone who maybe is aware they're not very good with soft skills and they want to work on that aspect of their career? Is there any advice you can provide?

David O'Connell: Yes, just **dive in and start talking to people**. I know some people are more shy and they don't like doing that. Earlier in my career, I was always hesitant to talk to folks, and you build up these scenarios that aren't going to happen. If you just talk to people and practice that as a skill, it'll be fine. It will be fine.

Andrew Obwocha: Yup. Fantastic. During your university life, whether as an undergrad or a graduate student, is there any particular experience or project that you did that was really beneficial to where you ended up today?

David O'Connell: Projects? I don't know if I can pinpoint one project from technical work. They all help and give you different viewpoints for how to analyze problems, so I have a hard time picking just one. If I can give a note related to your past question, I find **participating in public talks and giving seminars, and getting in front of people** was immensely helpful. So, the projects themselves, it's hard to identify just one, but getting in front of people and talking about your ideas was immensely helpful.

Andrew Obwocha: Yeah, another one that has been very commonly mentioned is **open-source contributions**. Essentially, focusing on the collaborative aspect of being a developer is very important, not just personal side projects, because those are a bit siloed. In reality, in the workforce, you're working with a lot of other very talented developers, so it's better to develop that skill of working with people.

David O'Connell: Absolutely.

Andrew Obwocha: Okay, so if you had 60 seconds to give one piece of advice to an aspiring software and AI student, what would you say?

David O'Connell: From my viewpoint as a more traditional software developer, there are a lot of changes coming with reasoning models helping write code. My advice would be: **don't be scared of that. Embrace that.** It's going to free you from a lot of the minutiae and a lot of the tedious work to do higher-level work. So, really learn how to use those tools, don't fight them, and build your skills in talking to people, understanding problems, and understanding how to deliver value. And also, build your skills in high-level architecture and allow yourselves the creativity to build solutions from the blocks that will help you build more automatically.

Andrew Obwocha: That's amazing. It's an intricate dance between using these AI models for productivity but still developing that software instinct. Basically, if I wanted to, I don't know, style a flexbox in CSS, that might be very easily done using AI, but it might forgo the learning experience that will make it intuitive to me. Do you have any advice on how to balance both understanding the skill that AI is doing but without necessarily giving up the productivity that these reasoning models help you achieve?

David O'Connell: Yeah, so I think it's important that we're in the **fundamentals**. For a university student, I think it is important to learn how to write code, that's very important. If you look at things that they'll teach you in university, one of the first ones they teach is how to say "hello world," right? I think it's so important to do fundamentals like that, even though in my career, I don't do that; there's code that does that for me. Learn the fundamentals, learn how to write code. What we are seeing in the industry with these tools is the importance of a **code review** becomes very important. So you can generate all this code, which is usually pretty good quality. But having the skills to go through and understand what changes to make, how to harden it for production, or even pick out errors that might not be obvious, that's going to become even more important. Because it's going to become a world where we can generate code, but now, I think it should still be reviewed. I think we should still understand what it does, and those are the skills that will continue to be appreciated.

Andrew Obwocha: Fantastic. So, one last personal question: what's your favorite AI resource or tool that you always use? And how do you stay up-to-date with AI? Do you listen to podcasts, YouTube, or do you just hear it from a coworker?

David O'Connell: So, I do a lot of reading. Like **TLDR**—they kind of take and put together that list of articles for you, right? They pull together different sources of information. I like that one in terms of reading articles and seeing what's going on. For software and AI, there's another one I like called **Technology Radar**, and that's a consulting company that's got some pretty big names in it that pull together a list of different tools that they're using and feedback that they get in their client engagements. And that kind of gives you a little bit of insight into what's actually working in the industry and what you should keep an eye on and start bringing into your projects.

Andrew Obwocha: What about AI tools like ChatGPT, any image gen, or video gen that you commonly use in your work or personal use?

David O'Connell: Yeah, I've replaced straight Google searches with a tool called **Perplexity**.

Andrew Obwocha: Oh yeah!

David O'Connell: I like Perplexity quite a bit because it pulls together pretty high-quality solutions, with the asterisk that you should never rely totally on it; you should do the research yourself. But in terms of zeroing in on the actual source content and taking the nuances of those sources, it's really good at that, and it's pretty good at synthesizing information as well.

Andrew Obwocha: Does Perplexity have a cut-off date for its information?

David O'Connell: Yes. I don't actually know that, but I have seen recent information.

Andrew Obwocha: Okay, great!