

Ramona Schindelheim, WorkingNation editor-in-chief:

You're listening to Work in Progress. I'm Ramona Schindelheim, editor-in-chief of Working Nation. Work in Progress explores the rapidly changing workplace through conversations with innovators, educators, and decision makers, people with solutions to today's workforce challenges.

So it's the end of the year. Looking forward to 2023. And my guest today is Matt Sigelman, the president of the Burning Glass Institute, one of my favorite guests and someone who I love to talk to about skills and what skills workers need. So Matt, welcome.

Matt Sigelman, Burning Glass Institute president:

So great to be together as always, Ramona.

Ramona Schindelheim, WorkingNation editor-in-chief:

You have a new report you just put out December 1st on what the most popular skills are and I would imagine similar to maybe the last report, but maybe a little bit different. So what are you finding? How is skills evolving?

Matt Sigelman, Burning Glass Institute president:

So I'm going to quibble with language here just to start. I know it's not-

Ramona Schindelheim, WorkingNation editor-in-chief:

I love when you do.

Matt Sigelman, Burning Glass Institute president:

You're not supposed to quibble of language when your the guest on somebody's show, but there's a lot that's already out there on what's popular. What we were interested in looking at is the skills that are doing the most to disrupt work. That's not just a matter of, well, okay, we'll call something popular disruptive. I was talking to somebody the other day and they were like, why would I want something disruptive? It's like you don't want a disruptive kid in your class, but we mean the word very intentionally. There's certain sets of skills that are both growing the fastest and spreading the widest. Here's why that has the potential to be disruptive. Because those sets of skills where we see surging demand, where we predict continued surge in demand and where we're seeing them spread across sectors, across geographies, those are the sets of skills where we probably already don't have enough supply of talent and it's going to get worse. That's where you wind up upending the apple cart.

Ramona Schindelheim, WorkingNation editor-in-chief:

And disruptive doesn't necessarily mean bad, right? Because it can create innovation and new ways of doing things.

Matt Sigelman, Burning Glass Institute president:

Absolutely. So the four skills that we really double click on in the report are AI and machine learning, cloud computing, product management, and social media. And they define what economists would call an efficient frontier. Again, when you're trying to optimize between fastest growing and broadest spreading. And those skills, first of all, they're present in a huge portion of the job market. I was kind of floored. One in eight jobs from the C-suite to the Home Depot parking lot, one in eight jobs involves one

of those four skills, but more than the scope of demand. To your point, these are skills which are really coming to deliver value for workers and to correspondingly cause real pain points for employers. These are skills that are involved in doing the highest value work and people get paid accordingly.

Now, by the way, actually a note on that, I think I mentioned in one of the skills that we looked at here is AI and machine learning. And so I think there's something which is worth talking about in terms of what we're learning about automation since AI is what drives automation and it's a little bit different from the way we're usually tending to think about this. No less disruptive but disruptive differently from the way we normally think about it. So we all are used to and are very worried about and should be worried about this question of whether with the advent of automation we'll see jobs being replaced, where they're seeing human work become less valuable. One in five manufacturing jobs now involves one of these four skills and much of it is automation driven.

Ramona Schindelheim, WorkingNation editor-in-chief:

I just want to say, but you talk about that manufacturing and I just looked at the Fed beige book, the most recent release of the beige book. They said that they're still in many industries across the country and it's not maybe wide widespread, it's not every job, but they're still having trouble finding those people to fill those jobs. So they're not going away just yet. They could be replaced like manufacturing, you said.

Matt Sigelman, Burning Glass Institute president:

Yeah, and my point here is exactly that. So first of all, yes, we have deep shortages of people with these sets of skills. Those jobs take a long time to clear, a long time to fill. They command significant pay premiums. Employers are struggling to find this talent. And that's I think sort of in some ways part of the point that that goes a little bit against how we tend to think about automation and its impact.

The reality is that we're seeing that in jobs that involve automation, that involve AI and ML skills, that involve cloud computing, other sets of things, we actually see that you get paid more, not less. So this idea that human value gets erased when jobs get underwritten or underlined by technology actually turns out not to be true. But the real problem here and the real reason why we call these disruptive skills in that context, beyond the fact that it's just they're growing so fast and proving so difficult to find, is that when you introduce one of these skills into a job, when a job starts involving automation, it's not just that you cut and paste that skill into the job description.

Everything else that you do is the same. When these skills get inserted into a job, when a job becomes driven by automation, when the work moves into the cloud, many, sometimes almost all of the skills change. I'll give you an example. Actuaries, you don't tend to think about actuaries that often. They're off doing their computational math thing, not who you tend to go toward at the cocktail party or whatever. I shouldn't say that. I have a good friend who's an actuary, but anyway.

And I'd be delighted to talk with her any day, but they're doing computational math. Well, machine learning does computational math at scale. Now, not a lot of actuaries today are ML enabled, but those who are, it's kind of fascinating when you look at actuary jobs that involve machine learning, most of the work that they used to be doing, the computer's now doing for them. It's not that their job all goes away, but they're actually doing a very different job, frankly a more valuable job. But that means that in order for them to be ready to take on that new job, that more valuable job, and to stay relevant to the actuary field, there's a whole set of other skills that they're going to need to be able to acquire and they're going to need to be able to acquire them on the fly.

Ramona Schindelheim, WorkingNation editor-in-chief:

So their job from becomes more analysis maybe. So maybe is that more of a skill that they need? Because we talk about data analytics is really a knowledge based job.

Matt Sigelman, Burning Glass Institute president:

Yeah, it's judgment based. So that's exactly right. Data analytics comes out. Also developing the script. So Python becomes more important because you have to drive that automation.

Ramona Schindelheim, WorkingNation editor-in-chief:

I noticed on here too, product management and social media are the other two of the four skill sets that you need. How is social media, how does that play in that? We were just talking social media, people are writing stories really, right? Or is it the tech part of it as well?

Matt Sigelman, Burning Glass Institute president:

It's a little bit of both. And I was excited to see that social media kind of landed on that efficient frontier and that curve that sort of pushes the bounds precisely because it's a whole lot more accessible than machine learning or cloud computing for those who don't have a deeply technical background. It's interesting to see. It has as a result, somewhat different dynamics. If you come out of school with AI or ML skills or cloud computing skills, you're getting a premium from day one. Interestingly enough, jobs that are looking for social media capabilities at the entry level actually pay a little bit less than those that don't. But what you see is that as people develop fluidity with social media as a technology, that becomes table stakes for their leveraging that technology to do narrative development, to do brand building. And as a result, after about eight years, they're only making about 10% less than their peers who had those AI and ML skills.

Ramona Schindelheim, WorkingNation editor-in-chief:

So when we talk about product design, are we talking about website design or are we talking about using CAD to make a new product on the market, a new hard product on the market?

Matt Sigelman, Burning Glass Institute president:

So here we're focused on product management. It's a little bit different from product design. So this is the work that is involved in building applications, building products that people want to use, that people get real value from. There's been a sea change in how we think about and approach business problems. And you've probably heard about user centered design about this idea that you start by figuring out what's the problem that you're solving for someone, and then really trying to understand how are they going to use it and then driving the development and every facet of the development in order to create a product that's going to be not just a technical success, but a business success.

Ramona Schindelheim, WorkingNation editor-in-chief:

So what does this mean in the few minutes that we have left, what does this mean for both the business? What do they need to be thinking about and what does a job seeker need to be thinking about if these are those skill sets that you really, really need?

Matt Sigelman, Burning Glass Institute president:

Let's start here. So first of all, these sets of jobs or these sets of skills rather are coming to define a set of jobs. And those jobs are hard to fill and they're going to get harder to fill. And so if you're an employer, this says you better be building that pipeline of talent. And particularly if you're an employer in a industry where maybe you actually don't need this talent yet, coming soon to theater near you, these are skills that are spreading from Silicon Valley to Main Street. They're moving from the tech industry to every industry. And you need to be developing that pipeline today and realize that particularly in some geographies, that talent may not be there. And so you need to start to think about your own workforce as being a source for that talent, as being a reservoir of people who could be trained up to take on that work.

But we also have to realize that these skills, by virtue of the fact that they're spreading so fast, these skills are also coming to be kind of foundational. If I were, for example, a college president, I'd be saying, first of all, yes, there's some new programs of study oriented around the kind of jobs that are being defined by these technologies, but I'd also say these are coming to be new foundational skills for 21st century work. And I'd want to make sure that every one of my students had visibility to that, had access to learning these as part of the core foundations of any program. And so I think for workers, this is an opportunity. This is an opportunity to put yourself in the capper seat in your career. To be able to say, okay, where is the market going? What are the sets of skills that offer me not only the greatest value, the greatest pay premiums and so forth, but what are the skills that are most likely to move me up.

Ramona Schindelheim, WorkingNation editor-in-chief:

And where do I get them.

Matt Sigelman, Burning Glass Institute president:

Exactly. And how do I stay ahead of that curve?

Ramona Schindelheim, WorkingNation editor-in-chief:

Agreed. Matt, thank you very much for giving me a little insight into the new report, which we will link to on our website of course. And I want to wish you happy holidays.

Matt Sigelman, Burning Glass Institute president:

Thanks so much, Ramona. Great to talk as always. And happy holidays and happy new year back to you.

Ramona Schindelheim, WorkingNation editor-in-chief:

I've been speaking with Matt Sigelman, the president of the Burning Glass Institute. I'm Ramona Schindelheim, editor in chief of Working Nation. Thank you for listening.