Sunny Lee and Kiki Leutner

AI in recruitment

Davide Ravasi: Welcome to Mind shift, a podcast from the UCL School of Management. I'm your host, Davide Ravasi. I'm the director of the school and I study change in organisations. I study why and how organisations change or do not change, and how culture, history, memory and identity affect these processes.

Mind Shift aims to explore innovation in management, in conversation with members of the school's, diverse community of researchers. We'll be peering through the lens of their research to get an insight into the rapidly shifting world of management and organisations.

Today Sunny Lee and Kiki Leutner join me to discuss using artificial intelligence in recruitment processes.

Dr. Sunny Lee is an Associate Professor of Organisational Behaviour and she's the Head of Diversity at the UCL School of Management. Before entering academia, she worked in top global companies such as Accenture and Hewlett Packard. Her research looks at the role of stereotypes and biases in personnel decisions such as recruitment and promotions.

Dr. Kiki Leutner is the Director of Assessment Innovation at HR tech company, HireVue and a lecturer in Occupation Psychology at Goldsmith University of London. Kiki uses machine learning and psychometrics to develop innovative assessments for recruitment and selection. They try to make the process faster, more engaging, more accurate, fairer, and even more enjoyable for applicants.

So Sunny and Kiki, artificial intelligence now, it, it's prevalent in many aspects of our work these days and, and the use of of artificial intelligence in recruiting is also rising. Why don't we start by explaining exactly how it works, how artificial intelligence is used in this process.

Kiki Leutner: Yes, first sets start with the problem. Recruitment doesn't work very well, currently. Organisations have huge representation problems and they have a hard time focusing on competencies and skills that are relevant in the workplace over, you know, random personal characteristics an interviewer might pick up on.

And even problems like organising your recruitment process in a streamlined way. And technology is already helpful with that so we can implement best practices like structured interviewing more easily. Using a technology platform, for example. And then AI is really the most sophisticated end of that, where our main goal is to figure out what traits and characteristics an applicant has that are relevant for this job.

So, whether they're right for the job, whether they're qualified for the job, that's what we are trying to do with AI and recruitment. And we have been doing it for a long

time, even before AI was around. And we used to use personality questionnaires, IQ tests. I'm sure many people have done them before.

You'd get questions like, I like going to parties, and you have to answer one to five. They're a bit tedious, uh, in, in terms of format. And when you apply some new technology and AI, it becomes a lot more interesting, faster, better quality data. So instead of having to give you a one to five question like that, we can give you a video interview, where you can freely answer, describe yourself, describe your competencies, and then we can use algorithms to detect those work relevant skills.

That's really what we're trying to do with AI and recruitment.

Davide Ravasi: Thank you. So essentially you have, uh, an automated system that processes the video of the interview and, and tries to capture personality traits from our own response to the questions. Hmm?

Kiki Leutner: Yes.

Davide Ravasi: And, and how diffuse is this? Like, is it something that has been picked up by many companies these days?

Kiki Leutner: Yeah, so video interviews are not the only way to get information about candidates. You can also use things like game-based assessments and then use AI to score those assessments as well. So, there are different modalities. I think companies who have traditionally used psychometric assessments are slowly moving to these newer AI-based methods of psychometric assessments.

But the assessment market still is very small compared to how many people get recruited. So, there's huge potential to help other companies benefit from assessments because we know from looking at different recruitment methods that it's one of the most valid methods to find candidates who are good for the job. So really more companies should be using it if they want to hire based on competence.

Davide Ravasi: Hmm Yes, Sunny…

Sunny Lee: I can add, uh, like a few more comments to, uh, help us understand the big picture of, uh, companies using AI in recruitment. So, as Kiki said, companies are starting to use AI technologies in their interviewing or other assessment tools, but at the same time, companies are, have actually adopted lots of AI technologies in other parts of recruitment such as.

Uh, so for example, I will take one example. Uh, the audio company, audiobook company, Audible, have been using AI technologies to help placing their job advertisements into better and high traffic websites. And many companies are using chatbots to engage job candidates or potential job candidates in their, uh, focal recruitment processes.

So, all in all, uh, so if we consider these sort of companies who take AI elements in small bits of their processes, uh, we can say that almost 90% of Fortune 500 companies are now using AI in any way in their recruitment processes. That's what I read from a recent article.

Davide Ravasi: That's interesting and honestly a little bit scary, uh, because I suspect that yes, I'm sure that there are advantages, especially the capacity to, uh, process large numbers in a relatively, uh, small time.

But I suspect there are also disadvantages. Uh, why don't we start by understanding better, what do we gain by using artificial intelligence in, in recruitment?

Kiki Leutner: I think that you made the point, there are large volumes of applicants and a lot more people. You, you can pass through the system with the same effort and that is a huge advantage.

Maybe more so than people realise because what companies had to resort to was going to top colleges. We know they have a huge representation problem. So, you are already diminishing your applicant pool in terms of diversity and you are finding people based on the college they went to, rather than the skills they have for a job again, right?

You use that as a shortcut, which we know doesn't work that well. So that already is a huge advantage, being able to process more candidates and if your processing works really well, a higher likelihood of finding qualified candidates and opening up the pool to more diverse applicants.

Davide Ravasi: Yes. Sunny.

Sunny Lee: Yeah. Adding to Kiki's point, I can take, uh, concrete examples. So, uh, Hilton have been using AI tools in evaluating candidates interview performances in the way Kiki already explained to us. And then, uh, according to one article, Hilton, through using AI tools in their, uh, key core interview evaluations processes, reduced the time it took to hire a call center employee from 43 days to five days.

So as Kiki explained well, so one of the big a advantages of using AI technologies is about saving time and saving manpower in processing huge volumes of applications and their data.

Davide Ravasi: This is interesting, but if, if I understand correctly, it's not just a matter of time, of being able to hire people more quickly, but actually you're able to pay more attention to, to, to people's skills and traits as they result from interviews, right?

Normally, you simply wouldn't have the cognitive capacity to interview hundreds and hundreds and thousands of people, and you would just shortlist them based on, as Kiki said, where they graduated. But we know that there's excellent candidates that

may come from, uh, from schools that we would not normally associate with excellence.

And you're saying that artificial intelligence enables us to, to find these gems. Hm and, and gives them a better opportunity to be considered for later stages of the analysis.

Kiki Leutner: And, and that's true for artificial intelligence, but also just for using recruitment technology that implements best practices.

So, for example, structured hiring interviews, even if evaluated by humans, perform so much better and are one of the best hiring techniques you can use. But what we see in practice is unstructured interviews. But if you use a platform that makes it really easy for recruiters to ask the same questions, you know, evaluate the questions along the same categories, you are already a few steps into the right direction without even using AI.

And a second huge advantage of AI too for the candidates who are applying, we have to remember most people fail in the application process, and they can get back feedback that is meaningful and structured. So they can answer a video interview and we can give them the scores based on the AI assessment and we can clearly explain how they were derived.

We can give them developmental feedback so they can take something away as well, which would be a huge effort to do if you were interviewing with a human.

Davide Ravasi: Thank you. Thank you, Kiki. This is, this is useful to0. I, I must confess that I'm learning a lot myself about, about this. And what I understand is that, uh, there is a hope, maybe more than that, that machines may be less biased and more objective than humans.

Is that so, Sunny?

Sunny Lee: That’s a, uh, that’s a very important and relevant point in this discussing the pros and cons of using AI in recruitment or any other, uh, HR processes. But before delving into your core question, let me explain first about humans. Our weak spots.

Research and anecdotes have shown that humans are hugely subject to a large amount of conscious and unconscious biases in our work and in our everyday decisions.

For example, as a researcher, uh, for the past 10 years, I have run experiments on thousands of students and professionals simulating hiring, uh, jobs, hiring decisions. And I have kept finding that recruitment decisions are greatly influenced by evaluators, stereotypes, biases, and sometimes they're selfish motives above and beyond our job candidate's objective qualification.

We still prefer hiring someone who is good looking. We still prefer hiring someone who is similar to us in terms of their gender or ethnicity. And, we also want to hire someone who is seen to be instrumental to our own success at work.

That being said, I believe that by adopting AI technologies, we can greatly reduce human errors coming from our conscious and unconscious biases.

By and large, I think that machines are much more capable than humans of processing data in a more objective and consistent way. So, in short, uh, I know that there are different opinions and controversial ideas about the use of AI in recruitment, but by and large, I'm a little bit all for using that technology.

Davide Ravasi: But one could argue that, uh, a machine, an algorithm is only as good as its programmer. And if its programmer has some bias and stereotypes, wouldn't these be reflected in the, in the algorithmic search and, and and rating?

Kiki Leutner: Yeah, and this is a very good point and an important point for people who are considering using AI in their hiring.

And I would make the distinction between, a hiring algorithm and a psychometric assessment. And by psychometric assessment, I mean an AI algorithm that is held to all the standards of psychometric tests, and that is developed with a theory to it as well.

So everything I've been talking about that, we can analyse video interviews to get work relevant competencies, we can de-bias algorithms or make sure that they detect those competencies whilst being fair to different ethnicity and gender groups, et cetera.

That all needs skilled programmers and teams of people really involved to build those algorithms. Who are aware of the rules and regulations and recruitment, who are aware of the science and theory behind psychometric assessments and organisational psychology. And then also, um, top data scientists who are aware of the best de-biasing models that we have available at the moment.

And we're seeing advancements in that area. So, the EU has classified AI algorithms or they're in the process of publishing legislation as high risk. So, we need to go through extra checks with those algorithms to show that they're, um, not biased and that they make sense and that they're using relevant information.

That doesn't stop people from using biased algorithms in, in context like recruitment. And the Amazon example has been dragged through the press everywhere, um, where a bunch of engineers built a hiring algorithm based on scraping CVs. And it ended up massively biased because their workforce is so male heavy that the algorithm identified males.

Um, but that to me is not a psychometric test and it's not an assessment that, or it's not an assessment that a large corporation would, for example, use to hire their employees if they have any organisational psychologists involved in vetting the assessment algorithm before it comes in.

Um, we have other examples though of recruitment AI providers doing less than, well, let's say. So, we had a really, um, good report in the press, I think it was in the German press of a video interview provider, where people took video interviews with and without a head scarf or with and without glasses saying the same thing and being scored differently.

That's not what we want to see. Right? So those are the kind of, um, checks that we need to have in standards for our hiring algorithm.

Sunny Lee: Oh quick question for your example. So, this example of people wearing heads scarves versus not, so they're being evaluated by AI technologies not human beings, but still they're differently evaluated on their work skills, right?

Kiki Leutner: Yes. And to be fair to that company, this was done by a journalist, right? So, it's not a statistical analysis of if I, you know, have 10 people with a head scarf or a hundred people and a hundred without, do they score well? So, it can just be a glitch that one interview gets evaluated more than another.

But from a theory point of view, the algorithm shouldn't even look at anything to do with what's around your face. So, you wonder how did that contribute to the algorithm, what happened? Right? But that's an assumption we have. It might have been that the sound quality was better, the transcript was worse, something like that. Right? Um, but we need to make sure that algorithms A, score fairly, and B, look at theory driven features. That should make sense.

Davide Ravasi: This is very important because sometimes we tend to assume that artificial intelligence is better. By definition. The artificial intelligence is more accurate, by definition. But what you're telling us is that some artificial intelligence is more intelligent, uh, than than others and, and some artificial intelligence is not that intelligent at all.

And even artificial intelligence can be biased, can make mistake. So are there any other drawbacks in using artificial intelligence for recruitment, uh, recruitment processes?

Kiki Leutner: I mean, another thing to really look into is the data you use to build your algorithms. So that goes for both the features you use, like I touched upon, you shouldn't use anything around people's face because why would that be relevant for their job? Right?

Um, but then also what's the quality of that data? So, we've seen a lot of press around using any facial features in hiring algorithms because we know they're much less accurate for women and black women than they are for white men.

So, you are already using an a feature that in itself is differential for, um, different groups. And then you need to make sure that the data you have is also not biased. So, an example of bias data would be your workforce is majority male and you're using your workforce to model what the best candidate would look like is a classic example.

Although data scientists are getting really good at using biased baseline data and then using moderates to still come up with unbiased moderates based on biased baseline data.

Davide Ravasi: So, there has been research comparing the choices that, uh, artificial intelligent systems make compared to the choices that human evaluators make?

Is there evidence that these systems are now, at the level of development that they have now, are they better, more accurate?

Kiki Leutner: We need more research on that, right? So, we have,

Davide Ravasi: So we don't know yet.

Kiki Leutner: There are, there are studies, you know, um, very academic studies of, let's compare how good a human is at in interpreting someone's personality versus an algorithm. And algorithms do better.

We can look at the outcome of hiring algorithms and we have to, when we wanna sell them as psychometric assessments and say they're not fair based on the criteria that we know. Age, gender, ethnicity, right? Um, but I think there's an emerging field of academic research where we are looking at that in more detail and figuring out what are the human biases versus the, which ones can you balance out with machine learning

But what we know is that you can take a machine learning algorithm and make unbiased or fairly unbiased predictions, whereas Sonny's research shows and, and you know, indeed decades of research show that humans when they make hiring decisions are quite biased.

Sunny Lee: I totally agree with Kiki that we need more research on these topics. So even though, as I said, I'm a big fan of using AI and other technologies in our HR processes. But the point is, theory and practice do not always go together, right?

So even though, even when designers of the algorithms are sure that they design them in an unbiased way, we see an emerging number of anecdotal evidence showing that things are not like that. So, outcomes are pretty biased.

And one example I can take is from the, uh, mortgage lender who uses AI algorithms in evaluating applicants and then according to, uh, their own study, um, these mortgage lenders using AI algorithms were, have been favouring white American applicants over African American applicants. So, we need more research on the, the gap between theory and practice.

Kiki Leutner: We need research and we also need regulation. I think regulation is emerging, but it's, we haven't touched upon it, but the point is algorithms have to be well designed to not be biased. I think that's really the takeaway and to force companies to do that, you need regulation.

There's a company here in London, called Holistic AI, who are doing a lot of thought leadership on that and writing up the new legislation that's coming up.

Davide Ravasi: But how do candidates experience these kind of interviews? What do we know about it?

Kiki Leutner: Research is emerging. We know from providers as well as some published studies that video interviews are really popular, because they're time saving for applicants as well.

And many people take their video interviews outside of working hours, for example. You don't have to take a day off to interview, so they're just very convenient. And then in terms of video AI, so if you have interviewed AI scoring you, I think it all comes down to explaining to the candidate what they're being evaluated on and how. So that's what the candidate feedback that we get is we want to understand what are we being measured on and how are we be being measured on it.

So that's really crucial to provide that information for anyone who's putting their candidates through it. And then also to provide feedback after the interview process, which is totally possible and feasible to do with an automated evaluation process.

And that's where you really give back to candidates. And in that sense, it's an advantage over an in-person interview. And then also remember, candidates do, do in-person interviews later on in the process, right? So, it's not completely replacing the in-person interview.

Davide Ravasi: I think this is important to point out that it's not the algorithm that is making the final decision,

Sunny Lee: Just adding on this conversation. I, I believe that if not well designed and integrated, uh, some AI elements in recruitment processes can hurt candidate experience.

So from the perspective of organisational psychologists recruitment processes, each stage of recruitment processes forms a critical cornerstone of relationship building between recruiters and potential employees.

So, if anything goes wrong in early stages, for example, chatbots, making employees uncomfortable or feeling dehumanized, actually it can affect those people's later decision to pursue that opportunity or even accept a job. So even though it's true that final decision makers are human, initial experience interacting with AI can determine candidates further intention to pursue a job or not.

So I think, uh, organisations can try further integrate their AI tools in a more naturalistic and humane way if possible.

Davide Ravasi: That's a great point. And and it goes back to, to the drawbacks that we mentioned earlier and also to what Kiki mentioned about the importance of regulating this emerging field of using AI in recruitment, uh, in recruitment processes.

Which brings us perhaps to the concluding question of this podcast.

So, what is the future going to bring? The future of recruitment?

Kiki Leutner: I would love to see a future of recruitment where more companies use structured and standardized processes, and they use technology with AI if appropriate, to do that.

It really helps them do it faster, cheaper, and it will help us with our ultimate goal as organisational psychologists of getting people into the right jobs and helping with representation in companies. B,ecause if we recruit based on talent, and allocate opportunities based on talent, we will end up with a better representation of different ages, genders, ethnicities, and corporations.

So, it's, it's both a business goal, but it's also a societal goal of increasing representation.

Davide Ravasi: Thank you. Sunny, the view from academia?

Sunny Lee: Uh, I agree with Kiki in that having more technologies, whether AI or not, and having more structures in our HR processes would benefit many of us. And given that AI is a nascent technology, I think for a while it is important to keep both human and AI elements in recruitment and other HR processes so that they can monitor each other and then they can fix each other's errors and issues.

Davide Ravasi: Well, thank you Sunny, and thank you Kiki for introducing us to this fascinating world of the use of artificial intelligence in selection and recruitment. And, and if you want to learn more about this, uh, uh, Kiki has just, uh, written a book on the future of recruitment that you can find online. And I don't think you need an artificial intelligence to find it, just Google it.

Kiki Leutner: Thank you for having us, it was a pleasure.

Sunny Lee: Thank you. It was a great time.

Davide Ravasi: You've been listening to Mind Shift, a podcast from the UCL School of Management.

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