### vervoe

# Understanding our Al

At Vervoe we believe artificial Intelligence (AI) in recruitment can be a double-edged sword. Used ethically, AI is a tool for good that provides powerful, bias-free data points. But in an unregulated industry, some vendors are releasing ill-considered AI solutions that automate and compound human biases.

As Al technology becomes increasingly prevalent in recruitment processes, we think it's important that the people who use the solution understand the technology, how it works, and recognize the ethical challenges involved



#### Al in recruitment falls into two subsets:

#### Rule-based AI (Decision trees)

Rule-based Al involves very simple, rules-based engines that have been programmed by a human to respond in a specific way to a trigger. In hiring, an example could be software that scans CVs for keywords to create a shortlist. These decision trees, however, can only be as socially aware as their designers and there's been many examples of rule-based Al indirectly perpetuating inequality.

#### Al machine learning

Significantly more advanced than decision trees, machine learning (ML) learns from data, compares it to known outcomes, and finds patterns to understand the things that happened to reach a result.

Examples in hiring include ML models that learn from historical data what makes a good or bad hire in an organisation, or Al that analyses candidates' written input and tone of voice.



The main difference is that rule-based Al works by doing what a human has told it to do, while machine learning figures out what to do for itself.

This is why at At Vervoe we use Al machine learning to predict the job performance of candidates as its ability to continuously improve ensures equity and fairness for all.

## How does Al machine learning work at Vervoe

We use a set of 3 different models that measure and predict performance.

#### How model

Tracks and analyses the way a candidate interacts with the assessment.

For example: How long does it take them to complete? Do they scroll back to a previous question? Do they consistently type or are there long pauses? Do they click away and come back? This model essentially grades how a candidate works and would be the same as you standing behind the candidates' watching them complete the assessment.

This model is the first of the 3 to provide a score and stops being dominant once the What model is activated.

#### What model

Analyses the content of the candidates responses and benchmarks them against millions of other responses. Through natural language processing candidates responses are viewed looking for words, phrases and sentiments that accurately reflect the outcomes required.

For example if you're hiring a Call Centre Agent you might be looking for someone with skills like attention to detail and empathy.

Our models process thousands of responses quickly looking for certain words or sentiments that reflect these values accurately. Candidates that display more of these are graded higher. The what model uses existing blind data sets, new candidate data, and user input in the form of correct answer samples.

#### **Preference Model**

Which uses the Naive Beyes method to predict probability. This model requires input from the user to train it to understand what the scale of bad to good answers looks like for their specific use case. Using a model called `iterative` to execute this a user blindly grades a set of candidate responses to individual questions giving a score from 0 - 10. The set of questions that are exposed for the user to grade are the furthest apart from each other. For example, a user grades one response as a 10 our model will then look for an answer that seems to be completely different to this to see how you score that. This variation in responses helps the model quickly identify and plug the gaps in between the potential score ranges to accurately grade all candidates with your preferences in mind.

