Applicant Tracking Systems (ATS)

Introduction

What are ATS?

Nowadays, more and more parts of our day-to-day life are gradually becoming digital. Our work lives are not excluded from this process. From working fully remote to networking and applying for jobs, work is increasingly taking place from behind a screen. In this article, we will zoom in on the application process. Because digitization makes it easier for many people to apply for a position, a single vacancy can attract hundreds or even thousands of applicants. With that many applicants, the challenge of manually filtering through potential candidates for a job is becoming too difficult to handle for the average company. In response, companies have started streamlining their recruitment processes by using an ATS.

The ATS, or the **"Applicant Tracking System,"** is software that aims to facilitate the hiring process within a company. While ATS can take many forms, the one you'll probably interact with the most relates to its capacity to filter through job candidates. The ATS makes this possible through the process of **machine learning**. An ATS will scan through applications to identify the ideal talent based on a job position's expected skills, experience, previous education, or any other metric the company is interested in. Filtering through dozens or even hundreds of applicants is now more efficient. This helps the company to streamline the process, which ideally saves time for both the hiring company and the applicant awaiting a response.

Machine Learning

In this case, the term machine learning can be used to describe the process of automatizing data analysis to find patterns in data. In general, machine learning is seen as a branch of artificial intelligence aiming to imitate to various degrees the way humans learn.

Other ATS features include **candidate sourcing,** where a company can scout for a specific candidate profile, **analytics** to reveal hiring trends, and **automations** to trigger specific hiring stages at certain times.

- **Candidate Sourcing:** Companies may want to assess their options before posting an opening. If, for example, they have already looked for a "Data Engineer" in the past, they can compile the resumes of the people they have accepted into the perfect Data Engineer profile. Using this profile, the company can actively look for, therefore, "source," their desired employee type across online employment-oriented platforms.
- **Analytics:** This ATS perk can be applied across levels, from recruiting, to talent retention and promotion, to workforce succession. Not all companies can afford to delegate their data analysts to work on HR data, so an ATS is often used instead. The software is most useful for creating predictions through people analytics to update the profile of the company's workers constantly.
- **Automation:** ATS can help take some tasks off HR's hands by creating workflows. The ATS can plan when the job opening goes online, manage recruitment-related emails, and set up interviews.
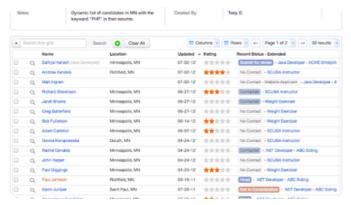
People Analytics

Collecting and processing data about people at work to improve business outcome.

How does it work?

The ATS is used to gather, analyze, and sort resumes based on statistical methods, grammar, or most popularly, keywords. In the case of keyword-based analysis, the ATS is used to identify words and phrases to form judgments about the resume.

The technology implemented at this level is called **Natural Language Processing** (NLP) and involves a computer understanding and analyzing human language. The ATS scans the resume for certain parameters that the company chooses beforehand. These can be keywords representing the desired hard or soft skills, relevant previous education or relevant job titles. Based on the findings, the ATS creates a profile for the candidate and attaches a job-match percentage, which indicates how likely the candidate will be a good match for the job.

Source: JobScan

Behind the Screens

While ATS can be a great solution for streamlining the recruitment process, many problems can surface from their implementation. Most of these stem from a lack of information or false expectations. People for instance tend to assume that technology is more fair than we are. This couldn't be more wrong. In machine learning, the field tasked with extracting patterns out of data, there is a saying: **"garbage in, garbage out"**. This means that a software is only as good as the data that it uses. If a recruiter uses the ATS with the wrong settings, or if previous applicants don't provide a comprehensive profile for the respective job, the ATS will probably be ineffective.

For example, looking for applicants who have a certain number of years of experience would prompt the ATS to filter out people with employment gaps. Preferring recent experience over a set of skills disproportionately harms those with parental leave, chronic illness or disability. This phenomenon has coined the name "hidden workers". Harvard has made a very interesting report on this topic, which you can find **here**.

Another example of bias within ATS is fully visible in **this Amazon oversight**, when their ATS blatantly rejected all women applicants. The ATS translated the gender imbalance in the tech field into a preference for male applicants.

There are new legal implications tied to organizations using ATS. If an applicant feels like they were discriminated against by software without being granted the chance to deal with a real person, they can sue the company. Algorithms can fuel bias against marginalized groups, with little transparency into how companies filter their applicants. Luckily, the trend now is to switch from negative exclusion to positive inclusion, for instance, looking for "people who can code in Python" rather than crossing out "those who don't have a Master degree". In addition, there are several initiatives aimed at mitigating bias. One would be to mathematically include the concept of fairness within the AI. Another one is to always include a human "in-the-loop", so as to never leave the decision solely to the AI.

Bias in AI

How to mitigate bias in AI on an algorithmic level? Simply stating "AI should not discriminate" is an optimistic but shallow goal. How do we quantify this in a software? While this is a topic still under research, some approaches are already being put in practice. For example, programmers can choose to eliminate any feature from their data that could cause bias, such as gender or race. However, an AI could extract these features from other seemingly objective measures such as zip codes. Another way would be to create mind map of words and see how they correlate to each other. This could help anticipate terms that can be sources of bias.

In reality, the more you know about the ethics of the company, the better. Reach out to former employees on LinkedIn if you're unsure. This way you can expand your network and know how to prepare better.

How to Make the Most of It

From one AI to another, target parameters – and thus what they look for – may differ. Keeping in mind that recruiters strive for efficiency, most ATS are easy to tweak in between job openings. Therefore, the best way to anticipate an ATS's scoring is to tailor each application specifically to that vacancy. This means, mentioning the exact specific skills mentioned on the vacancy on your CV where it makes sense. Here are a few tips on how to pass an ATS screening with flying colors:

Myth: *I should paraphrase the job description in my application, otherwise the recruiters will think I am unoriginal.*
Truth: The ATS will only look for keywords related to the specific job opening it is applied for. It is therefore advised to use the same terms as in the job posting, as it will score you as a better fit candidate. Depending on the software each company uses, the AI might not even recognize different forms of the same word – saying you "managed" a team instead of adding "manager" as a keyword.

Myth: *ATS and AI in general are automatic software, so they are less likely to be biased against my resume.*
Truth: While an AI itself has no opinion, there is always a recruiter behind it who knows what they want. Whatever bias the human has can easily creep into the software. This is a problem that can sadly be amplified by the demographic of that respective job position's field. For example, the IT field is, for now, still male-dominated (This is where you Techionistas come in to make a change!). To get around gender bias, use gender-neutral words. In addition, use wording that diverges from terms that can be described as women-coded: "must-have" skills instead of "nice-to-have" skills.

Myth: *I can include all keywords from the vacancy and make the font white so that the ATS will select me as a very suitable candidate.*
Truth: Although the ATS will pick you up as a suitable candidate, don't forget that there will be a human reading your resume after the ATS makes the final call. Trust us when we say that recruiters tend to be unimpressed by this way of "tricking" yourself into their list. Just have a look at what this recruiter said about it.

Try It Yourself!

You can have a sneak peek at what an ATS may be looking for by using JobScan's simulation! Click **here** to test your resume's match to a job opening's requirements. JobScan will point out what you're doing well and what you can improve, so you can ace an ATS scan.

Keep in mind that most ATS cannot easily switch between languages. If your resume is in English, then it's most likely to work well with vacancies that have their descriptions in English as well! And remember, there is no one-solution-fits-all. Find a few openings that you really like and tweak your resume for each of them.

Sources

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