Gamification – a pain killer for cybersecurity hiring

Liljana Pecova-Ilieska, from North Macedonia, is CEO of IMPETUS, the Center for Internet, Development and Good Governance. She is passionate about discourse analyses and psycholinguistics as an innovative tool for marketing, advertising and disinformation propaganda in cyberspace. She is engaged in consultancy with international organisations and the author of several research papers looking at data protection, anti-corruption and surveillance vs privacy.

The pain of HR

The generational gap in cyber knowledge, the technology development, overall globalization of cybersecurity and many other circumstances affect the development of new methods and ways to reach appropriate human resources that will contribute to the achievement of organizational goals. Specifically, when there is a need to have in-house resilient cyber environment. Bringing new people is already a risk. Just by adding a new e-mail contact in the employees' list is already a communication "fuss", but also a risk for spam and phishing mails. So, it really matters who is the newcomer and what kind of cyber hygiene he/she has.

The recruitment of human resources includes the selection of the most appropriate candidates, with the help of different methods. The main idea is to find the best possible profile that will be attracted for a certain job position. However, is not always easy to match the profiles. The LinkedIn hashtags and community affiliation, or even word of mouth, are no longer working as features, especially when talking about cybersecurity. Those may be considered as basic drive, but would not be a great help to HR. Very simply because cybersecurity is developing as a multidimensional knowledge. And you do not always know the criteria based on which the profile was recommended to you. So how do you assess what kind of cybersecurity profile you need in your organization?

Shortage of people or shortage of people with certain skills

One of the recent developments in the cybersecurity is looking greatly in bringing different aspects and experiences in the house. Bringing new people not always means assurance of bringing new skills. For example, how did you improve your cybersecurity resilience by employing two more IT experts, when your risk assessment was that the enforcement of internal policies was the main issue and threat to your company? Therefore, it is from utmost importance to understand that more people with same skills would not necessarily improve the situation, yet developing skill offsets would.

The main concern of an employer is that he/she would like to know how the potential candidate would act/react in a different scenario. Is he/she bringing a risk? Since apart of the skill and value the potential employee is bringing on the table, there is a behavioral attitude in applying digital security that comes along. You may want to introduce induction training, policy enforcement, etc. but you definitely do not want to come that far in sanctioning.

Today, gamification is more often mentioned as a method that can contribute to the process of recruiting human resources in an organization. It is the practice of using game theory, game mechanics, and a gamer mindset to engage and motivate individuals toward a goal, especially in a non-game setting such as work. Organizations have the opportunity to use gamification to improve the interest of potential candidates for employment and to perform a better screening of them.

Finding the best possible "partner in crime"

Gamification essentially means gamification of an individual's engagement in order to gain more exciting and natural insights about them and their capabilities than traditional methods that fail to gain those insights. In the context of recruitment, this means applying role plying in order to attract job candidates, put them in a certain situation and see their reaction and behavior in a different, deeper and more fun way. With the help of this method, a correct assessment of the candidates can be made, because we, as human beings, always want to play. The majority of Gen X and Y, who comprise the majority of the working age population and are the most digitally and technologically literate and advanced generations, were raised in the age of video games, and learning through play always gives the best results. But it can also bring forward the benefits of the game play, by reducing the stress and frustration of making a mistake, which is not acceptable in the world of adults.

The games themselves create a more relaxed atmosphere that is very different from the traditional way of recruiting. This gives job candidates the opportunity to express themselves more freely and show their potential more realistically. The gamification of human resources recruitment allows the integration of the recruitment process through quizzes, games, tests and other challenges that will encourage candidates to interact with the organization and thus make a better attraction and a better screening of the same. At the same time, the challenges will create a virtual stimulation of the job candidates, and in this way the recruiters will have the opportunity to value their specific skills, their creativity and innovation, the way of solving problems, etc. For example, setting games as scenarios of cyber defense/attacks would enable the recruitment process of finding the best cyber security experts matching different roles. Such game-based - platform may be open 24/7 for playing, during the recruitment process.

Immersive Learning Tool

It is very important to introduce gamification into the recruitment process slowly and carefully. Therefore, first of all, clear goals should be set that will be measurable so that the effects can be seen. This means that the organization should plan the introduction of gamification in the recruitment process, that is, it should know exactly what games it wants to introduce, what will be their purpose and how it will measure the results. The selection of game activities should be an engaging experience for job candidates, while also providing them with entertainment. The chosen tools, for the organization, should enable obtaining clear feedback on the candidates and revealing their uniqueness.

The choice of content and game modes should provide diversity that will attract different talents with which synergy will later be established, opportunities should be created to discover the true reaction of candidates according to the requirements of the workplace, an opportunity should be made to identify specific skills among job candidates, and at the same time, a positive experience should be created among candidates that will improve and increase the attractiveness and image of the organization itself.

The application of gamification in the recruitment process can enable a more objective and reliable assessment of candidates, saving time and money, attracting a larger number of candidates, winning the best talents, improving the image of the organization.

When speaking about cybersecurity, cyber incidents or scenarios should be at place to challenge not only the skills, but mindsets, and above all the value that we want to see at people for embracing the cybersecurity policy in the organization. Finding the best possible "partner -in-crime" would increase the bar to select the most suitable candidate. Sometimes, the organizations would go for selecting the value rather than the skill. Since skill can be learnt, whilst value and integrity have to come along and be there already. Therefore, gamification can be a valuable tool for pre-assessment of candidates, specifically when speaking about bringing people with values in cybersecurity terms. Why is that necessary? Cybersecurity is not technical thing anymore and any less. It is more to say a mindset package installed. Once the games begin, the behavioral analyses should talk more about the percentage of that package being (un)packed.

Is AI helping to find that package?

The embedding of AI in HR in recruitment is an attractive prospect for employers for several years already. It is sold as Data-based decision about hiring with reduction of costs, reducing the burden to HR also. However, a team of reporters from Bayerischer Rundfunk 2021 (German Public Broadcasting), performed several experiments, testing whether their hiring judgements are actually robust (replicable and not falsifiable). Several changeable features were addressed and the candidate was evaluated by the software, changing the outlook with glasses, scarf, the background (with or without paintings on the wall), etc. The results showed that the software was adding points for having ponytail hairdo or adding glasses, or bookshelf background. It is devastating to see bias at such visible level, performed by AI. But as we see the automation of hiring

was actually not to easy up the recruitment process, but to easy the part of rejections. By selecting the rejections, it is the "leftovers" as the package deal we have. So, in terms of affirmative hiring, the candidate's level of success is measured on the basis of how big the number of rejections would be. In another setting of types of rejections, the candidate may have bigger chances to win. But in that case, is there a risk that the AI can be "poisoned" by spamming it with videos (from the same candidate or fake candidates) just by changing several features just to increase the rejections?! Did I just figure out how to deceive this AI recruitment software?!

Interesting study about the predictive tools across the hiring funnel are explored by Bogen, M., & Rieke, A. (2018), prescribing cumulative approaches, such as: sourcing, screening, interviewing and selection.

I would argue here that gamification could be add to this funnel and easy up the recruitment process, since then you know with whom you want to play. Gaming gives clear perspective "on which side you are" and can be used in positive connotation, rather than the negative (increasing the rejections). And when cyber incidents happen, the employer would like to know the friends and foes.

Retention challenges for personnel – playing it against each other

Gamification of recruitment can be seen also in terms of role-playing. It is easier for each employee to know his/her role in the organization. As in any mechanical system, each part has its own function, no matter how small it is. That's why is working constantly and effectively. Since each knows their function every time you switch them ON.

If the gamification recruitment process can show what kind of role the candidate is expected to play, it would easy the process for the candidate himself. He/she may does not want to be in that role, once they "play the game".

As a model, it can also help to retain the trained staff and expertise. Arrangements in playing games with others (vendors, stakeholders, customers) can set up the tone of "belonging" and "ownership" in the organization. It is worth researching it further for perhaps introducing a new business model – to team up with a computer-controlled buddy, or with a friend in the fun co-op mode from another company. The next step would be to offer offsets so the customer sees which team can play better.

Reference list

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