Episode 03: Facial Expression Analysis with Tajeshwar Grewal

Oindrila: Hi, I am Oindrila and I welcome you all to a new podcast episode!

Today we will be discussing the exciting topic of how emotions analysis is being used at workplace.

To discuss how organizations can better develop and improve their offerings by incorporating human emotions in the mix, we have our guest, Tajeshwar Grewal, Product Manager and a Marketing Genius in the Digital Workplace Business at HCL Technologies.

He is a true technology visionary who foresees the future of workplace and suitably utilizes pioneering technologies to develop avantgarde solutions that revolutionize the workplace. Having been in the workplace scene for about 6 years, he has made his presence felt across the industry with his unconventional products.

Oindrila: Hi, Tajeshwar

Tajeshwar Grewal: Hi, Oindrila

Oindrila: Thank you, for joining us today. We really appreciate you taking out time to talk to us.

Tajeshwar Grewal: Thank you for inviting me. I'm always looking forward to connecting with fellow tech lovers.

Oindrila: And we are excited to learn of some cutting-edge technology and how businesses are exploiting them.

So Tajeshwar, with the proliferation of IT and the severe competition in the industry, what are the business leaders focusing on to stand out from the crowd?

Tajeshwar Grewal: The last decade was all about the consumerization of IT. Its permeation is evident across industries. The metrics of differentiation have blurred. The time in which a feature or a function is added to a solution and brought to the market to compete against similar products is minimal, as compared to earlier times.

Instead of jumping right into the competitive bloodbath, enterprises are now trying to enter the blue ocean by creating their niche. To achieve this, they are now turning to end user experience. It is no longer something which is good to have. A superior UX is almost a necessity if you want your product to compete with the top dogs.

Oindrila: That makes complete sense!

All of us agree that user experience holds paramount importance.
Since it is such a critical component to focus on and incorporate, everyone must be doing it, right?

Tajeshwar Grewal: No, identifying the need is only one aspect of the puzzle. The tricky part is understating that if you are planning to focus on the UX as a priority, during product development, you are aiming at a moving target. This is because the user's expectations from

the solution, in terms of interacting with it, keep changing and it is hard to keep up. Yet, it cannot be ignored.

This is where feedback comes in. User feedback indicates which path the product owners should take to come as close as possible to the ideal user experience state. That is why you can see so many mobile applications constantly asking you for your feedback. Also, the only way to improve a service or a product beyond a point is to capture honest feedback from the users.

Oindrila: Feedback is clearly the key here. How are organizations going about capturing feedback these days?

Tajeshwar Grewal: Currently, in our workplaces, users are asked to fill in survey or answer quick questions to share their feedback. This is done immediately after the consumption of the service or after some time. There are two major flaws with this approach.

- Firstly, the system to capture this information is very intrusive. The users must pause whatever he is doing at that moment to fill in the responses. This comes at the cost of losing his chain of thoughts and focus that he had on the task at hand. Even after paying this price, the information collected cannot be relied upon as there is a huge possibility that the responses are biased. At that moment, the user is generally more inclined towards finishing the survey and getting back to work. This compromises the authenticity of the responses.

- Secondly, the delay in capturing the information is another major flaw. How can you expect the user to precociously recall how his experience was? At most, even if done correctly, the user shares the feedback based on the emotions he felt at the end of the interaction. Clearly if you are a product manager or any other stakeholder trying to capture the user feedback, the information coming in from these mediums cannot be relied upon to make future roadmap decisions.

Oindrila: So TJ, in your opinion, what can organizations do about it?

Tajeshwar Grewal: Technology is catching up to fill in these gaps. There are now many vendors in the market who are working on ways to capture non-intrusive real-time feedback. These tools have been used in very controlled environments with focus groups to score marketing campaigns, product prototypes etc. These systems consisted of many elements measuring the user's pulse rate, blood pressure, facial expressions, eye movement etc. to capture information that translates into an emotions-based score.

In terms of bringing this concept to everyday touch points to measure real-time feedback based on emotions, the only metric that can be measured without movement constraints and expensive equipment is facial expressions. With advanced computer vision and deep learning, real-time facial expression identification and analysis is now a reality. There are now products available, designed for the enterprise space, that analyze emotions in images, videos and real-life environments.

Oindrila: Hmm, I agree! But I believe there will be a lot of privacy concerns. What can IT organizations do to capture this but also not violate employees' privacy?

Tajeshwar Grewal: In the IT services domain, the idea is to capture the whole range of emotions that the user experiences while interacting with services like a vending machine, IT support kiosks or walk in support zones. The information collected can then be used to better those services by indemnifying the steps or bottle necks that need to be optimized. Soon, we can expect similar feedback systems being made available on end point devices too. There is no intention to capture identifiable information like facial recognition or other biometrics.

Oindrila: I see! So, what is HCL's Digital Workplace Business doing in this regard?

Tajeshwar Grewal: HCL is working on some very powerful product offerings in this space. We have been witnessing the shift for some time now. Customers insisting on having experience-based service agreements instead of standard SLAs is no longer something out of the ordinary.

Earlier, similar discussion used to get blocked at the point of defining the metrics of user experience and we had to limit these to measuring the hardware, software and network performance. We assumed that if the enablers are working fine, the user is having a good experience but now we have tools which can help refine these findings and help us calculate a much accurate score.

These solutions, though not mature in terms of accuracy, are a step in the right directions. Existence of such technology that can be scaled across huge campuses is evidence enough that business owners have now realized that the delivering a positive end user experience is the only way to survive in this cutthroat enterprise landscape.

Oindrila: Thank you very much, TJ, for sharing your views and enlightening us.
And when we come back after a short break, we will ask TJ for his takes on some trending consumer tech. Stay tuned!

Oindrila: Welcome back. In this segment, we ask our guests to summarize their opinion about some exciting consumer tech. So, are you ready TJ?

Tajeshwar Grewal: Sure. Bring it on!

Oindrila: Continuous Authentication

Tajeshwar Grewal: This is important and not many people are talking about it. We have always looked at authentication as the point of login, but a user can move away from the machine after logging in and someone else could be using the machine and accessing data that they don't have the rights to access. There are now tools that continuously authenticate the user throughout the session using parameters such as pattern of mouse clicks and keystrokes on the keyboard. In mobile devices, sensors can be leveraged to do the same. This will definitely become mainstream and soon.

Oindrila: Blockchain
Tajeshwar Grewal: I think the technology is great. Decentralization is the future. Enterprises are still figuring out how to use blockchain at scale. Exciting times.

Oindrila: 3D Printing
Tajeshwar Grewal : One of the rare technologies which is useful as well as feasible. In laboratories, it is great help to scientists and researchers to build prototypes and in the real-

world people are utilizing 3D printing to build houses in disaster-stricken areas. Look forward to seeing India put it to good use.

Oindrila: Foldable Phones
Tajeshwar Grewal: I get the nostalgia factor. I know people loved the original flip phones. I am personally not a fan but I won't mind someday having a screen the size of an iPad in my pocket.

Oindrila: Android or iOS
Tajeshwar Grewal: I have used both. I keep switching. Currently I am using android and don't feel tempted to change.

Oindrila
It was wonderful having you on this episode. We learnt so much about how human emotions are being captured in a non-intrusive manner to develop and continuously improve products. Thank you again for your time and we hope for an opportunity to Oindrila you again.

Tajeshwar Grewal: Thank you. It was a delight talking to you.

Oindrila: I thank all our listeners for joining in! We want to hear from you. We need your feedback.
The contact information is available in the description. Comment, share, recommend and subscribe.
See you all in the next one.