Kluwer Arbitration Blog

Arbitration Tech Toolbox: Emotion AI: A Game-Changer for Efficiency and Due Process in International Arbitration?

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Emotion AI, also known as affective computing, is a specialized field within artificial intelligence that recognizes and interprets human emotions. This is primarily achieved through analyzing facial expressions, voice patterns, and choice of words. Having found applications in various domains such as health and defense, the market for emotion AI is experiencing substantial growth, currently with an estimated value of around 30 billion USD.

In a legal context, elements of emotion AI are already being used in negotiation and mediation processes (e.g., AI-powered chatbots used by Walmart to negotiate with suppliers).

In international arbitration, parties or arbitrators could consider using emotion AI to enhance efficiency and due process (or to gain a strategic and tactical advantage). Emotion AI tools could be used during a case management conference or hearing to monitor participants' level of attentiveness, engagement, confusion, and anxiety in real time. This would allow for immediate feedback and detection of potential weaknesses or contentious points, and provide valuable insights for drafting submissions, preparing closing statements, or addressing relevant issues in post-hearing briefs. Emotion AI could also potentially assist in assessing the credibility of witnesses based on their emotional responses and could be useful during a client consultation, when preparing a witness for cross-examination, or when conducting a 'cognitive interview.' Law firms could thus use emotion AI to predict the emotional impact of legal arguments on judges.

Opinions differ as to whether we truly need emotion AI to effectively 'read the room.' However, the substantial progress made in emotion AI through deep learning and reinforcement learning technologies has shown that these systems are capable of interpreting and responding to social cues more accurately than humans. This technology can identify over 130 emotions and micro-expressions (at least according to MorphCast's claims). Therefore, while traditional methods of understanding emotions through psychology exist, emotion AI is likely to become a more capable approach. Soon, maintaining a 'poker face' will no longer be enough to conceal one's emotions or biases.

This post, albeit briefly, explores how emotion AI works, showcases its practical applications, and considers its future potential. Although applications are varied, we will focus on two uses: (1) efficiency through facilitating settlement; and (2) due process through ensuring arbitrator attentiveness.

How Does Emotion AI Work?

Fundamentally, apart from listening to the actual words used, we discern human emotions such as happiness, stress, sadness, and anger by (1) reading facial expressions; (2) listening to intonations; and (3) watching body language, including posture, gestures, and eye contact.

You may not be surprised to learn that emotion AI systems are bound to excel human capabilities in these tasks, especially when it comes to the analysis of micro-expressions. Emotion AI systems are quick to recognize subtle, involuntary facial expressions that often reveal genuine, hidden feelings. By monitoring fleeting micro-expressions—the subtle muscle movements around the eyes, mouth, and forehead—emotion AI can detect discrepancies between verbal statements and true emotions that too often escape human attention.

Emotion AI systems are powered by neural networks trained through machine learning, where algorithms and models are created to enable computers to learn from data to make predictions or decisions. Machine learning algorithms use statistical techniques to identify patterns and relationships within data, continuously enhancing their performance over time. This technology finds applications in diverse areas, including image recognition and natural language processing. The capability of neural networks doubles every few months, significantly enhancing emotion AI's outcomes.

Emotion AI can generate detailed behavior reports presented in a user-friendly format with visual graphs and data points. For example, MorphCast Emotion AI can be used during virtual hearings or meetings to identify emotional reactions, monitor attention levels, and assess engagement in real-time. As shown in video clips on the MorphCast website, the analysis is conducted live, and a comprehensive analytics dashboard is available afterwards for thorough review of all the data collected.

Enhancing Efficiency Through Facilitating Settlement

In the ongoing effort to improve the efficiency of the arbitral process, there is a growing emphasis on the role of the arbitral tribunal in facilitating parties to achieve an amicable resolution. To that end, arbitral institutions have incorporated specific provisions in their rules or guidelines, providing that the arbitral tribunal should organize regular midstream conferences with the parties (see e.g., the recent Article 30 of the NAI Arbitration Rules or the 2023 ICC Commission Report on Facilitating Settlement in International Arbitration).

A midstream conference provides an opportunity for the parties to understand each other's perspectives (both on procedure and the merits) and for the arbitrators to observe whether the parties are open to settlement. In essence, it allows all participants to peep into each other's 'heads.' While it's not an arbitrator's role to take an integrative approach like a mediator or negotiator would, the arbitrator could explore whether the parties have a common underlying interest to settle the dispute amicably. Soft skills, such as perceiving and responding to implicit cues, are important for fostering an empathetic and responsive dialogue. By considering the parties' emotions, an arbitrator can better facilitate the problem-solving nature of the process, guiding discussions constructively rather than allowing them to become confrontational.

The integration of emotion Al could not only enable better perception and response to implicit cues, but also optimize communication management by providing feedback on non-verbal signals of all participants. In this way, a settlement to the satisfaction of all parties can be made more attainable. While people may be able to discern these signals in one-on-one interactions, it becomes challenging to process the signals from multiple individuals in larger arbitration settings with teams of lawyers and party representatives. An emotion AI application could not only monitor the main speakers but also reveal valuable information expressed by others present in the room, providing crucial insights that might be missed even by those skilled at 'reading the room.' Valuable insights can be gained from the behavior of others in the (virtual) room, such as a subtle nod from an opposing counsel or a party representative, which may indicate an opening. One could argue that an individual could practice self-awareness and mindfulness to manage and regulate their non-verbal communication in certain situations, but completely concealing all non-verbal cues is not considered achievable.

Enhancing Due Process Through Ensuring Arbitrator Attentiveness

Having an attentive arbitrator during a hearing is essential for due process. The importance of this was illustrated by the refusal of the Court of First Instance of Hong Kong ("Court") to enforce an arbitral award for an arbitrator's lack of attention. The Court held—after reviewing the video recording of the hearing—that the arbitrator's behavior of frequently moving around, going offline, and even being in a vehicle during crucial parts of the virtual hearing, did not meet the expected standards for a fair and impartial hearing and thereby violated the basic principles of justice. The Court emphasized that "*audi alteram partem*" ("listen to the other side") is a fundamental principle of natural justice, ensuring that no person shall be judged without a fair hearing.

The cited case is rather straightforward, and the facts could easily be derived from reviewing the recording of the hearing. Of course, lack of attention can be much more subtle to detect. Employing an emotion AI system could monitor the arbitrators' attention in less obvious circumstances. An emotion AI system could potentially reveal if a member of the arbitral tribunal was not paying attention during part of the hearing, thereby indicating a potential lapse in due process. By detecting signs of inattention, such as insufficient engagement or distraction, emotion AI could promptly alert the tribunal to address these concerns. This proactive approach may involve granting the parties an opportunity for supplementary submissions or revisiting specific segments of the hearing to ensure thorough consideration of all evidence and arguments. Implementing such measures would then serve to uphold the integrity of the arbitral process without resorting to the extreme actions of challenging the arbitrator or setting aside the award.

A Need for Guidance?

The integration of AI into various sectors, including international arbitration, is inevitable and promises to be transformative. The real challenge lies in how we manage its implementation. Before we get too excited, one should consider that AI systems, including emotion AI, still face challenges today, including ethical concerns surrounding data privacy and bias in algorithms, 'hallucinations,' and limitations in understanding context. The process of detecting emotion is intricate, involving considerations of cultural context, verbal cues, and behavioral patterns.

However, these challenges do not seem insurmountable with the development of technology. Moreover, emotion AI has the potential to reduce human bias and mitigate cognitive errors that are difficult to correct by providing insights into the emotional state of those we interact with.

On balance, emotion AI should be embraced, albeit within responsible and ethical boundaries. Robust data protection measures, transparency, adherence to local, national, and international laws, and a mechanism for challenging outcomes are needed (see e.g., the European Union's Artificial Intelligence Act). In the arbitration context, the Silicon Valley Arbitration and Mediation Center recently published their Guidelines on the Use of Artificial Intelligence in Arbitration in April 2024.

In our view, the use of emotion AI to enhance, prepare, conduct, or monitor proceedings should be done transparently, consensually, and in compliance with legal and ethical guidelines to ensure fairness and accountability in arbitral proceedings. Prior to using emotion AI in sensitive contexts such as hearings, the accuracy and reliability of such systems should be scrutinized. Participants should also be given the opportunity to familiarize themselves with the system. When deploying emotion AI to record individuals and capture and analyze their expressions, it would only seem reasonable for the user to openly disclose the specific application and its precise purpose to both the other parties and the arbitral tribunal. Additionally, it could be agreed that any documentation generated by the emotion AI system should be shared for review, allowing human oversight over emotion AI's findings. We hope that future debate amongst practitioners will lead to consensus and over time, only systems considered reliable will prevail.

Further posts in our Arbitration Tech Toolbox series can be found here.

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