



MODULE

iMotions Voice Analysis

Insights from vocal data

iMotions Voice Analysis

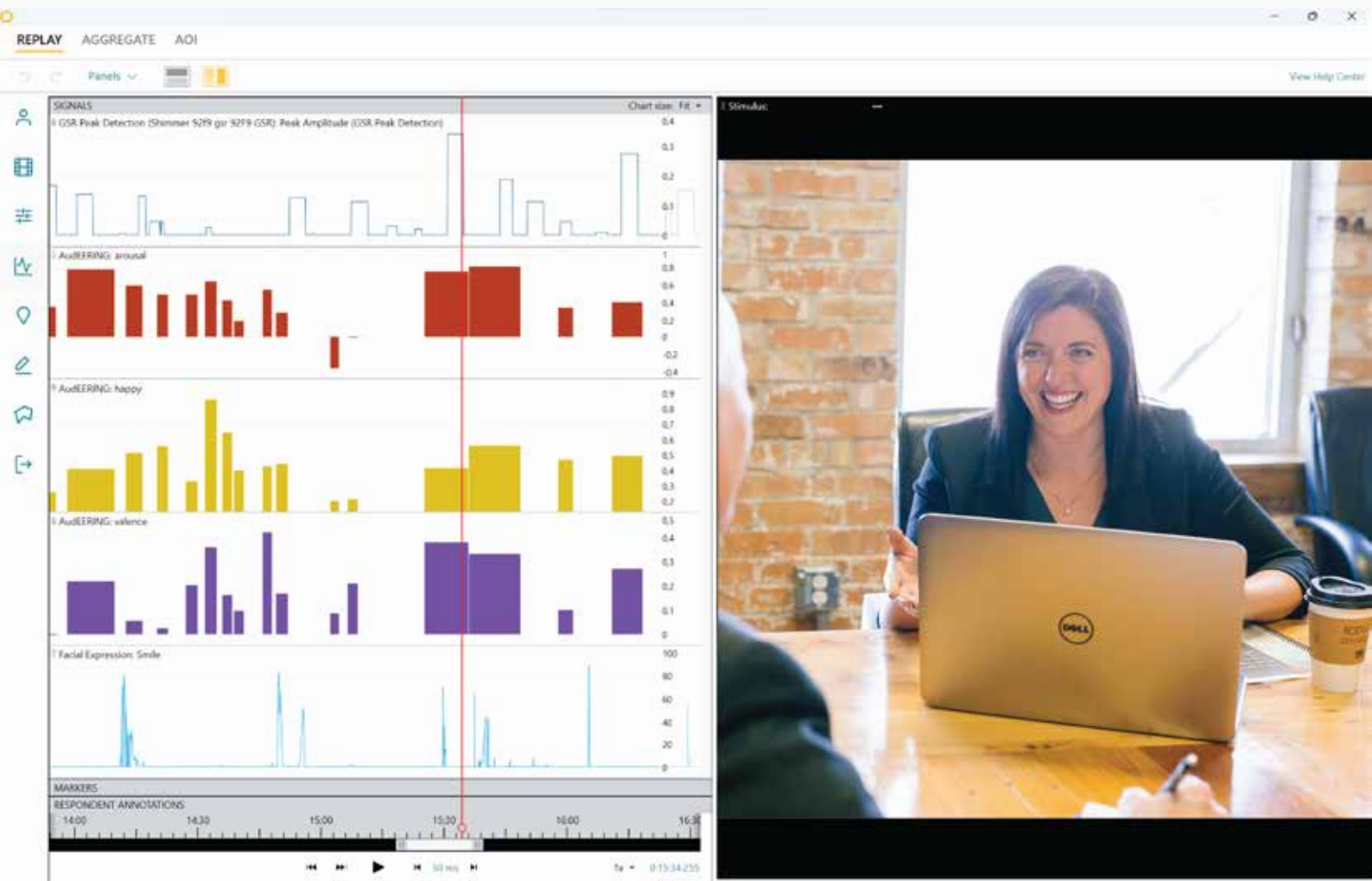
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Voice analysis

Discover new insights with vocal data

Voice analysis opens up an entirely new layer of human behavior data to be explored. While this technology has been firmly established in academic use, the application of the modality is only now beginning to emerge as a widely used practice. iMotions provides voice analysis through audEERING - a pioneering company producing the world's leading voice analysis technology.

- Non-invasive insights into people's mental and emotional states
- No new hardware required - reprocess old studies for new insights
- An established methodology with a perfect fit for novel applications
- Combine with speech-to-text analysis for complete coverage of vocal expressions
- All processing takes place offline and locally, helping ensure privacy and security



A new layer of human data

A deeper understanding

What can the voice tell us?

Voice analysis is the process by which vocal sounds are measured and associated with defined metrics – such as the emotion, prosody, or presence/absence of speech. Crucially, voice analysis doesn't provide any direct information about any words used, but rather the way in which they were produced. Over the last century, researchers have found that our voice can tell us a lot about ourselves, including our emotional states and which diseases we may be experiencing. Voice analysis is particularly powerful due to its versatility, non-invasiveness and accessibility..



Explore every part of the voice

The voice analysis module allows for analysis at every level of vocal production. Go deep into emotion analysis and collect data related to emotion detection (angry, happy, sad, neutral), and emotional valence (arousal, dominance, and valence). Explore fundamental voice features with metrics relating to prosody, including pitch, loudness, speaking rate, and intonation. Get data regarding perceived gender and age. Add in speech-to-text analysis from AssemblyAI to assess the semantic value of words alongside the valence related to their production. Use this data to build a thorough understanding of the otherwise hidden features within spoken words.

The leading company within voice analysis

iMotions has partnered with audEERING - the world's leading voice analysis company. audEERING's roots trace back to the AI research group by Prof. Björn Schuller, creator of openSMILE. Together with Dagmar Schuller, Dr. Florian Eyben, Dr. Felix Weninger and Dr. Martin Wöllmer, they founded audEERING in 2012. audEERING develops applications for voice analysis, emotion detection, voice biomarkers for detecting diseases, and much more.



Hidden in sound

Reveal otherwise hidden data

An established and growing methodology

Voice analysis research has been taking place for over 100 years, and is well-established within the fields of healthcare, human factors, linguistics, and psychology, where it is used to diagnose, characterize, and provide deep information about speech production and meaning. Voice analysis is also increasingly applied within UX studies during think aloud protocols, and for providing another layer of data within consumer neuroscience and neuromarketing protocols.



Old data, new insights

Analyze any data where voices are present. The voice analysis module allows you to collect and investigate new sources of data, and to reprocess pre-existing data. No specialized hardware required - audio recordings containing voice are all that are needed. Gather new insights with just the click of a button.

Easily integrated with other biosensors



Integrate and synchronize 50+ different sensors from 20+ independent vendors, across 10+ modalities. Add even more sensors through the Lab Streaming Layer. Forward data in real time and import external sensor / software data and loop it back into the platform via the API.

















iMotions Lab

Multimodal research in any environment







iMotions reduces the complexity of carrying out multimodal research, enabling a wide array of sensors to be seamlessly connected. By combining these different physiological measurements, it's possible to get a better understanding of human behavior in any environment.

Any Type of Stimuli:   <https://www.> **VR**

Screen-based Eye Tracking	 	Eye Tracking Glasses
Webcam Eye Tracking	 	VR Eye Tracking
Facial Expression Analysis	 	Voice Analysis
GSR	 	ECG
Webcam Respiration	 	EMG
Respiration	 	EEG
fNIRS		



- Real-time / Live view
- Analysis Tools
- Post Import / Annotation
- Raw data exports
- API data forwarding

 2.7k+ Clients	 1M+ Respondents tested	 107 Countries	 50+ Compatible hardware	 13k+ Publications	 100k+ Ads tested
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The iMotions software is a modular system, with a central hub upon which a variety of biosensors and their corresponding modules can be integrated. This multimodal approach is designed to streamline human behavior studies, from study design and stimuli presentation to data collection and analysis, all in one unified software suite to advance human behavior research.

Voice Analysis Metrics

Multimodal research in any environment

Emotion Categorical Model

Emotion	Happy	Angry	Neutral	Sad
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Emotion Dimensional Model

Emotion	Description	Value Range	Emotion Examples
Activation	Indicates whether an event has a calming/soothing or exciting/agitating effect	Ranges from low (-1) to high (+1)	Low activation emotions: sadness, relaxation, fatigue, depression, and contentment High activation emotions: joy, fear, anger, outrage, and excitement
Dominance	Indicates whether an event has an unpleasant/negative or pleasant/positive effect	Ranges from negative (-1) to positive(+1)	Low dominance example: fear High dominance example: pride
Valence	Indicates whether an event has an unpleasant/negative or pleasant/positive effect	Ranges from low (-1) to high (+1)	Low valence emotions: anger, sadness, fear, grief, and boredom High valence emotions: relaxation, contentment, happiness, and excitement.

Prosody

Metric	Description	Statistics
Fundamental Frequency	Frequency (Hz), closely related to pitch	Ranges from low (-1) to high (+1)
Loudness	Related to amplitude (Sone)	Ranges from negative (-1) to positive(+1)
Speaking Rate	Syllables per second	Ranges from low (-1) to high (+1)
Intonation	Variation in pitch in each speech segment	



Want to know more?

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