S2 Table. Metrics for determining the confidence score (CS), the recognized emotion label, and the emotion classification score per video (B) based on the raw data (A) from the automatic classifiers.

\mathbf{A}

Video	Frame	Emotion Displayed	$EmotionRecognized_1 \\$		$EmotionRecognized_j \\$
$Video_1$	t_0	$EmoDis_{1,1}$	$\psi_{0,1,1}$		$\psi_{0,1,j}$
$Video_1$	t_1	$EmoDis_{1,1}$	$\psi_{1,1,1}$		$\psi_{1,1,j}$
$Video_1$:	:	:	•	:
$Video_1$	t_x	$EmoDis_{1,1}$	$\psi_{x,1,1}$		$\psi_{x,1,j}$
$Video_2$	t_0	$EmoDis_{2,2}$	$\psi_{0,2,1}$		$\psi_{0,2,j}$
$Video_2$	t_1	$EmoDis_{2,2}$	$\psi_{1,2,1}$		$\psi_{1,2,j}$
$Video_2$:	:	:	:	<u>:</u>
$Video_2$	t_x	$EmoDis_{2,2}$	$\psi_{x,2,1}$		$\psi_{x,2,j}$
:	:	÷	:	:	<u>:</u>
$Video_i$	t_0	$EmoDis_{i,j}$	$\psi_{0,i,1}$		$\psi_{0,i,j}$
$Video_i$	t_1	$EmoDis_{i,j}$	$\psi_{1,i,1}$		$\psi_{1,i,j}$
$Video_i$:	:	:	:	:
$Video_i$	t_x	$EmoDis_{i,j}$	$\psi_{x,i,1}$		$\psi_{x,i,j}$

\mathbf{B}

Video	Emotion Displayed	$CSEmotionRecognized_1$		$CSEmotionRecognized_j \\$	Emotion Recognized	Emotion Classification
$Video_1$	$EmoDis_{1,1}$	$\frac{\sum_{x=0}^{T} \psi_{x,1,1}}{\sum_{j=1}^{J} \sum_{x=0}^{T} \psi_{x,1,j}}$		$\frac{\sum_{x=0}^{T} \psi_{x,1,j}}{\sum_{j=1}^{J} \sum_{x=0}^{T} \psi_{x,1,j}}$	$\max(CSEmoRec_{1,j})$	$\begin{cases} EmoDis_{1,1} = EmoRec_{1,j}, 1 \\ EmoDis_{1,1} \neq EmoRec_{1,j}, 0 \end{cases}$
$Video_2$	$EmoDis_{2,2} \\$	$\frac{\sum_{x=0}^{T} \psi_{x,2,1}}{\sum_{j=1}^{J} \sum_{x=0}^{T} \psi_{x,2,j}}$		$\frac{\sum_{x=0}^{T} \psi_{x,2,j}}{\sum_{j=1}^{J} \sum_{x=0}^{T} \psi_{x,2,j}}$	$\max(CSEmoRec_{2,j})$	$\begin{cases} EmoDis_{2,2} = EmoRec_{2,j}, 1 \\ EmoDis_{2,2} \neq EmoRec_{2,j}, 0 \end{cases}$
:	:	:	:	:	:	:
$Video_i$	$EmoDis_{i,j}$	$\frac{\sum_{x=0}^{T} \psi_{x,i,1}}{\sum_{j=1}^{J} \sum_{x=0}^{T} \psi_{x,i,j}}$		$\frac{\sum_{x=0}^{T} \psi_{x,i,j}}{\sum_{j=1}^{J} \sum_{x=0}^{T} \psi_{x,i,j}}$	$\max(CSEmoRec_{i,j})$	$\begin{cases} EmoDis_{i,j} = EmoRec_{i,j}, 1 \\ EmoDis_{i,j} \neq EmoRec_{i,j}, 0 \end{cases}$

Note: i is one of the 937 videos processed, x is a video frame at t_x , j is an emotion label among anger, disgust, fear, happiness, sadness and surprise, and ψ is the value of the odds ratio for the frame t_x and for the emotion label j.