Analysis : Emotion Categorisation

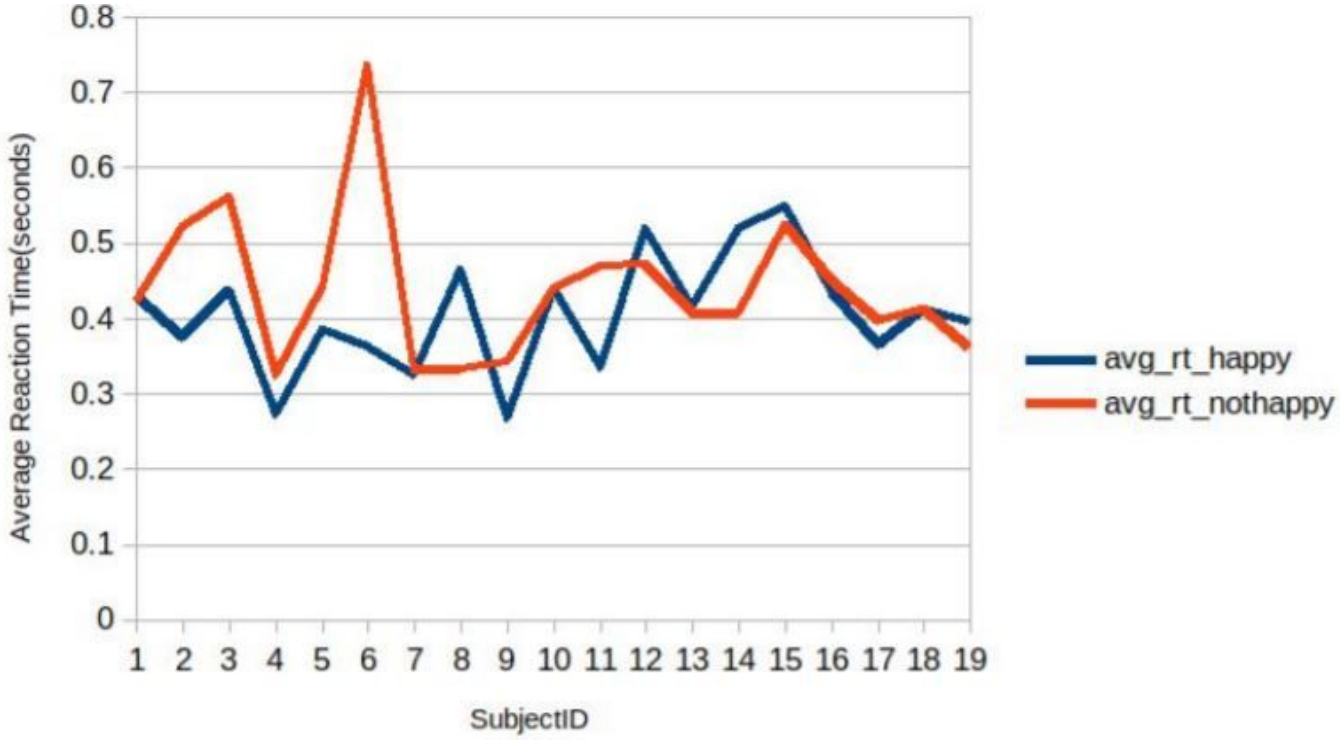
Background:

The experiment had two blocks: Block1 and Block2. In Block1, participants had to guess if the shown face stimulus was happy or not. They had to press the right arrow, if shown face was happy and left arrow, if it was not. In the second block, participants were shown a face stimulus and they had to press the ‘h’ key if the shown face was happy, ‘s’ key if the shown face was sad and ‘a’ key, if the shown face was angry. The reaction time of the participants for both the blocks was noted.

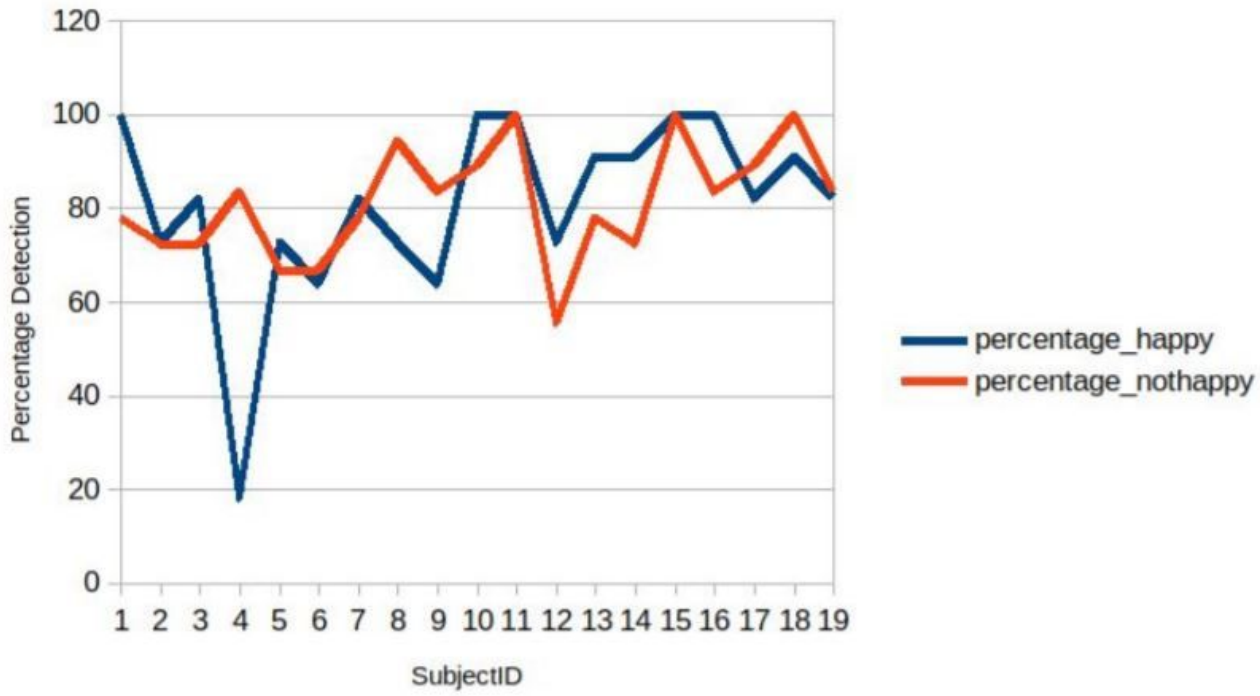
Design of the Experiment:

A. ‘+’ for 200 ms
B. Face Stimulus for 80 ms
C. Noise for 100 ms
D. Blank Screen to report emotion: 2 seconds

Block 1:

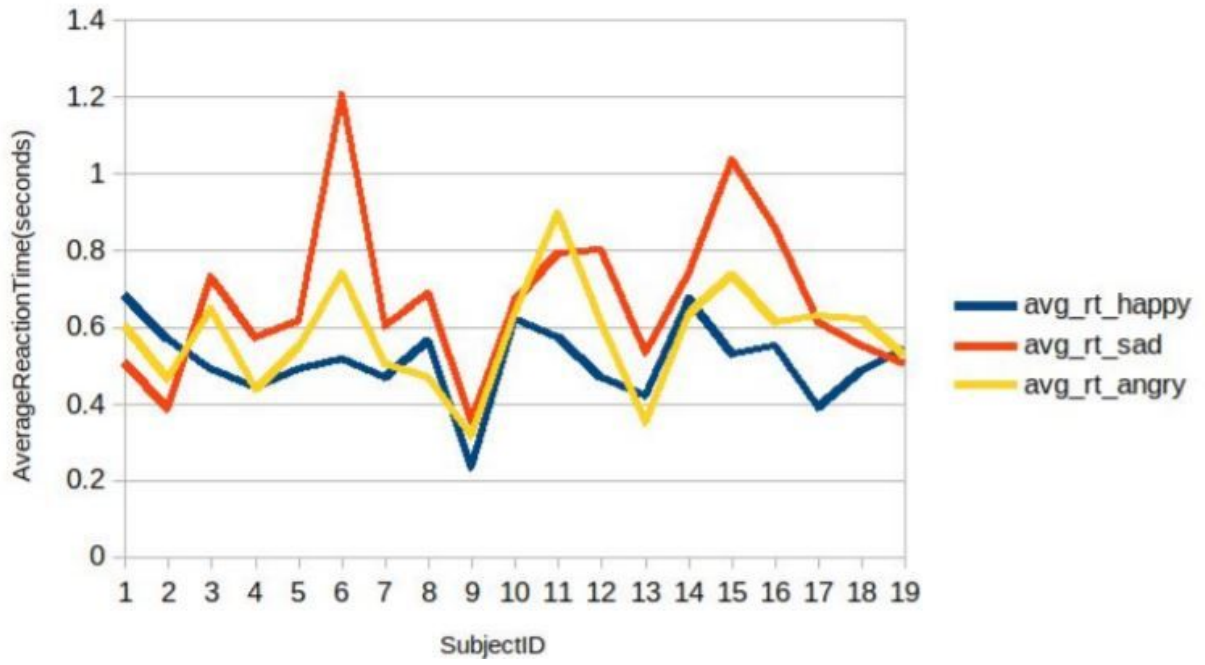


	Happy	Not Happy
Mean	0.405493578 s	0.4398947351 s
Standard Deviation	0.07475913354	0.09594758765

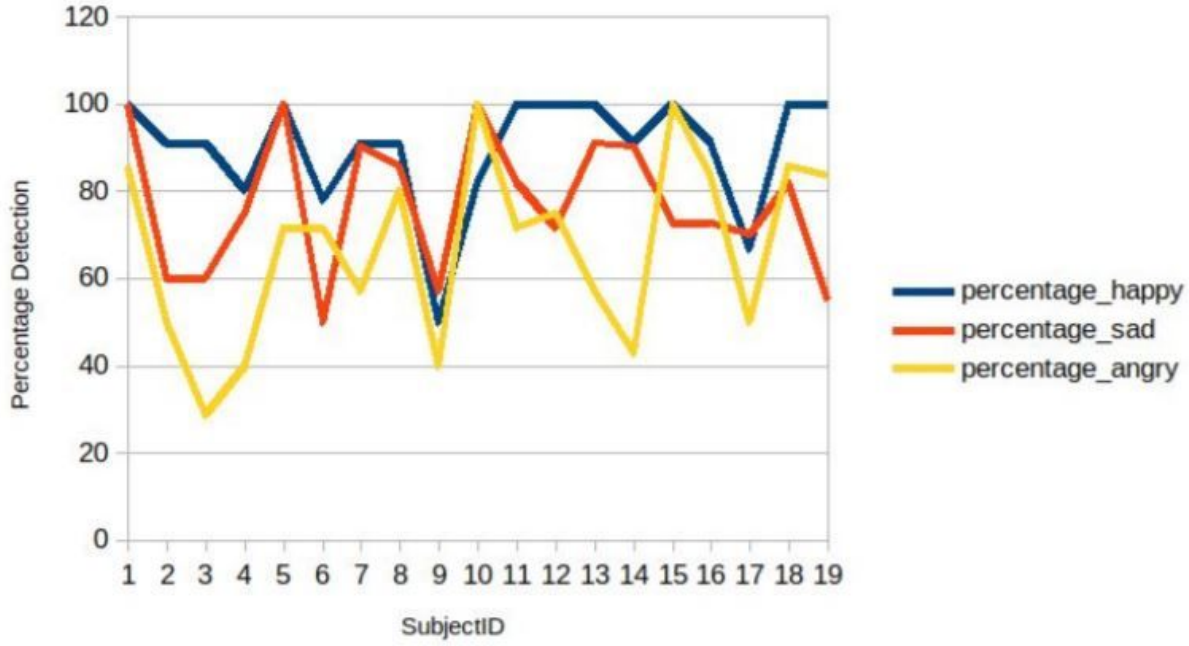


	Happy(%)	Not happy(%)
Mean	80.86124402	81.28654971
Standard Deviation	19.09084913	11.98473774

Block 2:



	Happy	Sad	Angry
Mean	0.5118233482	0.6714634915	0.5785035856
Standard Deviation	0.09976065664	0.2019494183	0.1343867583



	Happy(%)	Sad(%)	Angry(%)
Mean	89.56406167	77.04374573	67.00501253
Standard deviation	13.10306751	15.5035835	20.51161414

Across two blocks

>>>>> Reaction time did differ, in the block 1 the mean of reaction times to detect a happy face was 0.405493578 while in the block 2 it was 0.5118233482 which shows an increase in the reaction time for the participants for block 2. Thus, showing that the people detected happy faces with greater difficulty as is evident by the increased reaction time for block 2.
We can infer that when the options were less(happy/not happy) in block 1, participants detected the happy face faster as when compared to the block 2 where the options were more(happy/sad/angry).

Within block 2

>>>>> There was a difference in the reaction times for the detection of different emotional expressions(happy, sad, angry).
Following are the means of reaction times:-

- Happy: 0.5118233482
- Sad: 0.6714634915
- Angry: 0.5785035856

From the above time-means, we can infer that the participants most easily detect a happy face and have the most difficulty in detecting the sad emotion. The lesser times are for easiness and the greater for a little difficulty.