**11 statistical features:**

1. mean
2. standard deviation
3. skewness
4. kurtosis
5. 25th quartile
6. 75th quartile
7. quartile deviation
8. difference between max min,
9. coefficient of variation,
10. mean value of first derivative,
11. mean value of second derivative

**11 HRV features:**

1. mean heart rate
2. mean RR interval
3. standard deviation of RRs (sdnn)
4. standard deviation of the differences between all subsequent R-R intervals (sdsd)
5. root of the squared differences (rmssd)
6. proportion of interval differences of successive RRs greater than 20 ms 50ms (pnn20)
7. proportion of interval differences of successive RRs greater than 50 ms (pnn50)
8. Poincare plot SD1 (sd)
9. Poincare plot SD2 (sd2),
10. Poincare plot SD1/SD2 (sd1/sd).
11. Number of RRs (for quality check)

**33 Skin Conductance Responses features (EDA features):**

1. Power of the raw signal
2. Number of skin conductance responses (SCR)
3. SCR’s per second
4. Power of the SCR’s
5. Sum of the signals positive derivative (segments where the single increases)
6. Proportion between the positive derivative and the negative derivative
7. Mean value of the derivative of the tonic component (slow changing EDA component)
8. Mean value of the difference between the raw signal and the tonic component
9. Amplitude increase of the biggest SCR
10. Amplitude decrease of the biggest SCR
11. Biggest SCR’s increase time
12. Biggest SCR’s decrease time
13. Ratio of increase time and decrease time of the biggest SCR
14. Biggest SCR’s duration (from peak start time until peak end time)
15. Biggest SCR’s increase slope
16. Biggest SCR’s decrease slope
17. Average amplitude increase of all SCRs
18. Average amplitude decrease of all SCRs
19. Average amplitude increase ratio of all SCRs
20. Average amplitude decrease ratio of all SCRs
21. Distance (duration) signals max in min values
22. Overall signal change rate
23. Overall duration of the segments with a significant increase
24. Mean value of the segments with significant increase
25. Intensity of the segments with significant increase (duration \* mean value)
26. Significant increase change (max – min of the segments with significant change)
27. Significant increase divided by the duration (speed)
28. Overall duration of the segments with a significant decrease
29. Mean value of the segments with significant decrease
30. Intensity of the segments with significant decrease (duration \* mean value)
31. Significant decrease change (max – min of the segments with significant change)
32. Significant decrease divided by the duration (speed)

\*Note - EDA significate increase/decrease: 10% change (increase or decrease) sustained for a duration of 15 seconds

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| --- | --- |
| Heart rate – 22 features | * 11 statistical features of the raw signal * 11 statistical features of the first derivative of the raw signal |
| Skin temperature – 22 features | * 11 statistical features of the raw signal * 11 statistical features of the first derivative of the raw signal |
| Heart Rate Variability Features – 11 features | * 11 HRV features based on the band’s RR intervals |
| Electrodermal Activity – 61 features | * 11 statistical features of the raw signal * 11 statistical features of the first derivative of the raw signal * 33 SCR features |
| Correlation features | * 1 feature – Correlation between the EDA and the skin temperature |