parsec 4.0
A PARADIGM SHIFT

AI CURE

Where AI meets healing touch

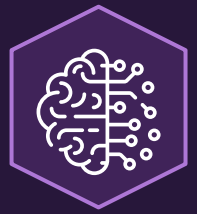
Problem Statement Description

Heart rate is a vital physiological parameter reflecting the frequency of cardiac contractions. Influenced by factors like age, fitness, and autonomic nervous system activity, heart rate serves as a key indicator of cardiovascular health. Monitoring heart rate during activities aids in optimizing exercise intensity and assessing overall well-being.The goal is to construct an advanced model capable of accurately predicting an individual's heart rate.

TASK

The goal is to construct an advanced model capable of accurately predicting an individual's heart rate.The dataset encompasses diverse attributes derived from signals measured through ECG recordings for various individuals, each exhibiting different heart rates at the respective time of measurement. These features collectively contribute to determining the heart rate at the specific moment for each individual.

BASIC REQUIREMENTS

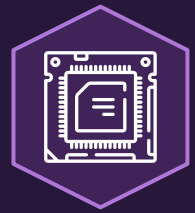


MODEL

Accurately predict an individual's heart rate.

REPORT

Submit a report detailing insights gained and experiments conducted during the competition.



RESOURCES

Ensure fair competition; report the results based on CPU, not GPU

DATA

The data includes various physiological features such as MEAN_RR (Mean of RR intervals), SDRR (Standard deviation of RR intervals), and LF_NU (Absolute power of the low-frequency band in normal units). These parameters offer insights into heart rate variability, distribution characteristics, and spectral components, providing a comprehensive assessment of the patient's cardiovascular dynamics.

You can find the training data here

CODES AND DOCUMENTATION

WHAT TO SUBMIT ... ?

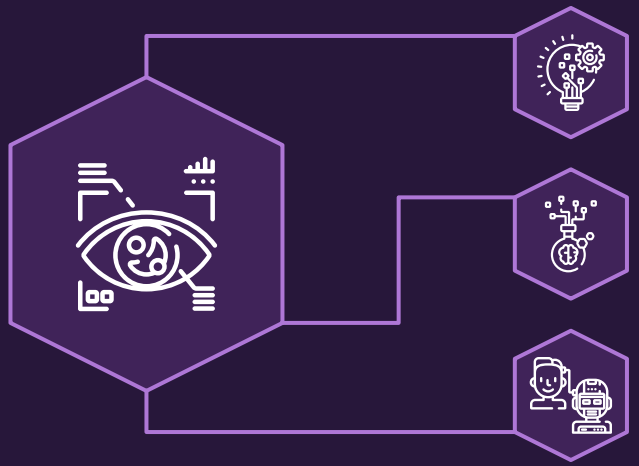
1. **Report** on the experiments and research done to implement the solution and Future work.

2. The complete project must be submitted as a GitHub repository, which will include all the codes, report, readme file or any other files.

3. A **ReadMe** file which will have all the necessary details related to getting the project working. Improper instructions written in the file will attract penalty.

4. The repo must be **tagged** before the deadline following the naming convention. Only tagged version will be evaluated

GUIDELINES



Team shall consist of 2-4 members.Members from different colleges are allowed to form a team.

Your Readme file should contain the team name, all the group members' names and contact numbers, which should be the same as in the registration done through Unstop.

Tag the repo with the name : aicure_<team_name>

You need to submit the link to the GitHub repository containing your submission (Code , Report , ReadMe).

Deadline will be followed as mentioned on UnStop

Make sure the repository you submit is a public repository .

EVALUATION CRITERIA

- Points will be awarded based on your model performance. Overall creativity will be judged.
- This applies not only to your use of a unique machine learning technique, but could also be a unique problem formulation, visualization of the data, evaluation metric, or use of existing tools.
- Points will be awarded based on the Report and ReadMe you submitted. Give a brief description for each and every point in the documents you submit.
- The evaluation of your model will be conducted using data that has not been disclosed to the participating teams.

COMPONENT	WEIGHTAGE
Code	70%
Report	25%
ReadMe	5%

ALL THE BEST!