Fetal Health

- **Problem statement:**

  - How to create a Classification model to classify Cardiotocograms (CTGs) features into the three fetal health states?

- **Data Description:**

This dataset contains 2126 records and 22 features. In this Project we will perform a classification model to Classify fetal health in order to prevent child and maternal mortality.

- **Data type:**

  - **Baseline value:** Baseline Fetal Heart Rate (FHR)
  - **Accelerations**: Number of accelerations per second
  - **Fetal movement**: Number of fetal movements per second
  - **Uterine contractions:** Number of uterine contractions per second
  - **Light decelerations:** Number of LDs per second
  - **Severe decelerations:** Number of SDs per second
  - **Prolonged decelerations:** Number of PDs per second
  - **Abnormal short-term variability**: Percentage of time with abnormal short-term variability
  - **Mean value of short-term variability:** Mean value of short-term variability
  - **Percentage of time with abnormal long-term variability:** Percentage of time with abnormal long-term variability
  - **Mean value of long-term variability:** Mean value of long-term variability
  - **Histogram width:** Width of the histogram made using all values from a record
  - **Histogram min:** Histogram minimum value
  - **Histogram max:** Histogram maximum value
  - **Histogram number of peaks:** Number of peaks in the exam histogram
  - **Histogram number of zeroes:** Number of zeroes in the exam histogram
  - **Histogram mode:** Hist mode
  - **Histogram mean:** Hist mean
  - **Histogram median:** Hist Median
  - **Histogram variance:** Hist variance
  - **Histogram tendency:** Histogram trend
  - **Fetal health:** 1 - Normal 2 - Suspect 3 - Pathological

- **Data size:** **No. of rows:** 2126 **No. of columns:** 22

- **Tools:**

  - Programs: Python Jubyter Notebook
  - Libraries: pandas, Seaborn, Matplotlib, scikit-learn

- **MVP Goal:**

  The goal of this project is to perform a Classification model to classify Cardiotocograms (CTGs) features into the three fetal health states