Data Collection and Preprocessing Phase

Date	7 July 2024
Team ID	739876
Project Title	FetalAI: Using Machine Learning To Predict And Monitor Fetal Health
Maximum Marks	6 Marks

Data Exploration and Preprocessing Template

Identifies data sources, assesses quality issues like missing values and duplicates, and implements resolution plans to ensure accurate and reliable analysis.
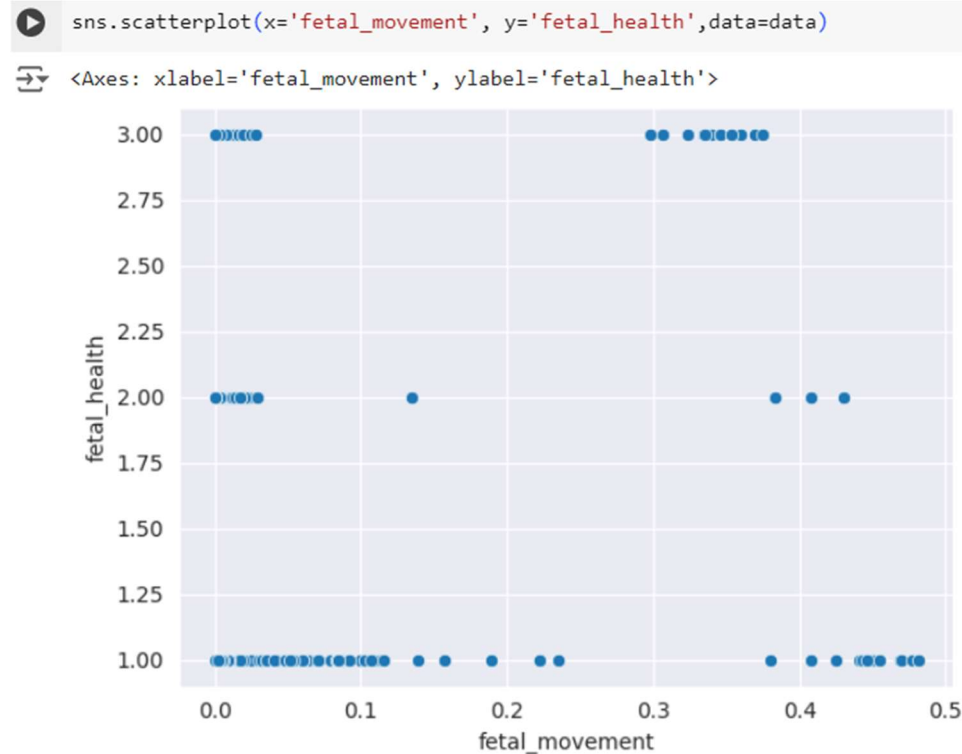
Section	Description
Data Overview	

Univariate Analysis	
Bivariate Analysis	

Multivariate Analysis	
Data Preprocessing Code Screenshots	
Loading Data	
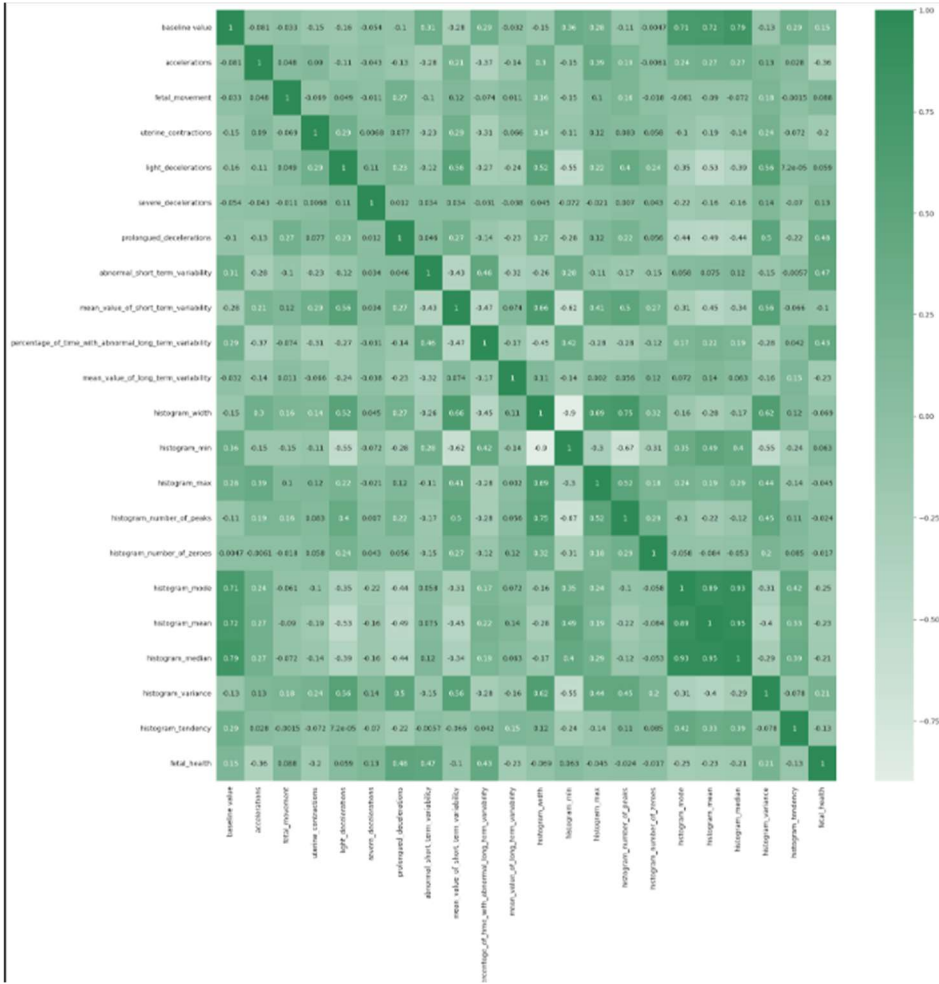
Handling Missing Data	```
data.isnull().sum()

baseline value   0
accelerations   0
fetal_movement   0
uterine_contractions   0
light_decelerations   0
severe_decelerations   0
prolongued_decelerations   0
abnormal_short_term_variability   0
mean_value_of_short_term_variability   0
percentage_of_time_with_abnormal_long_term_variability   0
mean_value_of_long_term_variability   0
histogram_width   0
histogram_min   0
histogram_max   0
histogram_number_of_peaks   0
histogram_number_of_zeroes   0
histogram_mode   0
histogram_mean   0
histogram_median   0
histogram_variance   0
histogram_tendency   0
fetal_health   0
dtype: int64
```

```
data.isnull().any()

baseline value   False
accelerations   False
fetal_movement   False
uterine_contractions   False
light_decelerations   False
severe_decelerations   False
prolongued_decelerations   False
abnormal_short_term_variability   False
mean_value_of_short_term_variability   False
percentage_of_time_with_abnormal_long_term_variability   False
mean_value_of_long_term_variability   False
histogram_width   False
histogram_min   False
histogram_max   False
histogram_number_of_peaks   False
histogram_number_of_zeroes   False
histogram_mode   False
histogram_mean   False
histogram_median   False
histogram_variance   False
histogram_tendency   False
fetal_health   False
dtype: bool
``` |
| Data Transformation | **Scaling Data**<br><br>```
scale = MinMaxScaler()
X = pd.DataFrame(scale.fit_transform(X), columns=X.columns)
X.head()
```<br> |

Feature Engineering	Attached the codes in final submission.
Save Processed Data	-