

Model Development Phase Template

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| Date | 7 July 2024 |
| Team ID | 739902 |
| Project Title | FetalAI: Using Machine Learning To Predict And Monitor Fetal Health |
| Maximum Marks | 5 Marks |

Feature Selection Report Template

In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.

| Feature | Description | Selected (Yes/No) | Reasoning |
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| prolongued_decelerations | It is abnormal fetal heart rate lasts for long time. | Yes | Prolongued decelerations are a concerning pattern in FHR that can indicate fetal distress and potential complications during labor. |
| abnormal_short_term_variability | It is irregularities in the fetal heart rate that deviate from the normal range of variability over short periods. | Yes | This variability is crucial as it reflects the autonomic nervous system's response and fetal well-being. Abnormal STV can be an indicator of fetal distress or other complications. |
| percentage_of_time_with_abnormal_long_term_variability | It is percentage of time with deviations in variability over longer periods. | Yes | Abnormal LTV can indicate fetal distress or other complications. It involves identifying the most relevant data points |

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| | | | that help in accurately detecting and predicting abnormalities in LTV. |
| histogram_variance | It is the variance in the distribution of data values. | Yes | This measure can provide insights into the distribution and variability of FHR data over time. |
| histogram_median | It provides a measure of central tendency, reflecting the middle value of a dataset when ordered. | Yes | It can offer insights into the central tendencies of heart rate values over time, which can be crucial for identifying patterns indicative of fetal well-being or distress. |
| mean_value_of_long_term_variability | It provides an average measure of the variability in the fetal heart rate over a longer period. | Yes | This can be crucial for detecting abnormal patterns and assessing fetal well-being. |
| histogram_mode | The most frequently occurring value (or range of values) in a histogram, which provides insights into the most common values in a dataset. | Yes | The histogram mode can reveal the predominant heart rate ranges over time, which is useful for identifying patterns and potential issues. |

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| acceleration s | It is short-term rises in the heart rate. | Yes | Analyzing accelerations can help determine fetal health and respond to potential issues early. |
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