

Project Design Phase-I
Proposed Solution Template

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| Date | 06 May 2023 |
| Team ID | NM2023TMID09316 |
| Project Name | Perinatal health risk predictors using machine learning |

Proposed solution:

| S.No. | Parameter | Description |
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| 1. | Problem Statement (Problem to be solved) | By predicting perinatal health risks accurately, healthcare providers can identify high-risk pregnancies early, provide appropriate interventions and care, and improve the overall health outcomes of mothers and their babies. |
| 2. | Idea / Solution description | To develop a machine learning model for predicting perinatal health risks, we need to collect and analyze a large dataset of maternal and fetal health information, including demographic data, medical history, prenatal care, and ultrasound data. |
| 3. | Novelty / Uniqueness | The use of machine learning algorithms for predicting perinatal health risks is not a new concept, and many previous studies have attempted to use various models for this purpose. However, there are several unique aspects of this proposed approach that make it novel and distinct. |
| 4. | Social Impact / Customer Satisfaction | Early identification of high-risk pregnancies: The model will enable healthcare providers to identify high-risk pregnancies early, allowing them to provide appropriate interventions and care to improve maternal and fetal health outcomes. This will lead to reduced rates of adverse perinatal outcomes, such as preterm birth, low birth weight, and fetal distress. |
| 5. | Business Model (Revenue Model) | Overall, a combination of these revenue models could be used to generate revenue from the machine learning-based perinatal health risk prediction service. It is important to ensure that the pricing model is affordable and provides value to the healthcare providers while still being sustainable for the business. |

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| 6. | Scalability of the Solution | Cloud-based infrastructure: Hosting the machine learning model on a cloud-based infrastructure can ensure that it can scale to handle large volumes of data and requests from healthcare providers. Cloud platforms such as Amazon Web Services (AWS), Microsoft Azure, or Google Cloud Platform can provide the necessary computing power, storage, and network resources to support a scalable solution. |
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