**Project Design Phase-I**

**Proposed Solution Template**

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| Date | 24 May 2023 |
| Team ID | NM2023TMID05792 |
| Project Name | AuditAI: A Machine Learning for Detecting Fraud in Audit Data |

**Proposed Solution Template:**

Project team shall fill the following information in proposed solution template.

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| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | The objective is to develop a machine learning model that can detect fraudulent activities in audit data to reduce manual review and improve accuracy. The project involves preprocessing data, applying feature engineering, and training supervised learning models. The success will be measured by accuracy and efficiency, and the model will be deployed in a production environment. The project aims to prevent financial losses due to fraudulent transactions. |
|  | Idea / Solution description | The solution is to build a machine learning model to analyze audit data, identify potential fraudulent transactions or activities, and flag them for further investigation. The model will use feature engineering techniques and supervised learning algorithms to detect fraud with high accuracy and efficiency. The solution aims to reduce manual review and prevent financial losses due to fraudulent transactions. |
|  | Novelty / Uniqueness | The novelty of this solution lies in the use of machine learning techniques to detect fraudulent activities in audit data with high accuracy and efficiency. The solution involves applying feature engineering techniques to extract meaningful features that can identify potential fraudulent activities. The model will be trained on a large dataset of audit data and will be able to detect fraud in real-time, reducing manual review and preventing financial losses due to fraudulent transactions. |
|  | Social Impact / Customer Satisfaction | The social impact of this solution is significant as it can help organizations detect and prevent fraudulent activities that may cause financial losses. This can lead to increased customer satisfaction, trust, and loyalty. The use of machine learning for fraud detection can also reduce manual review, save time and resources, and improve the accuracy of fraud detection.Ultimately, the solution can contribute to a safer and more secure business environment for both organizations and customers. |
|  | Business Model (Revenue Model) | The business model for this solution would involve offering a fraud detection service to organizations, which would involve integrating the machine learning model into their existing audit systems. The service could be offered on a subscription basis, with pricing based on the number of transactions or the size of the organization. The solution could be marketed to organizations in various industries that require audit services, such as finance, healthcare, and retail. |
|  | Scalability of the Solution | The solution is highly scalable as it can process large amounts of data and can be deployed in a variety of industries and organizations of different sizes. The machine learning model can be trained on new data to improve accuracy and can be easily integrated into existing audit systems. Additionally, the solution can be expanded to include additional features and models to detect new types of fraud and adapt to changing fraud patterns. Overall, the solution is flexible and can be customized to meet the needs of different organizations and industries. |