High-Level Design Document for Money Laundering Prevention System

1. Introduction

This document outlines a strategic approach to designing a system aimed at preventing money laundering. It delineates the overarching architecture, including essential components and their interconnections, ensuring an efficient and secure framework for identifying and mitigating potential money laundering activities.

2. System Architecture

The architecture encompasses a user interface, an application server, a machine learning model, and a database, each playing a crucial role in facilitating a robust and responsive system capable of predicting and analyzing suspicious financial activities.

3. User Interface

The system provides a seamless user interface, enabling effortless interaction and data input, which is then processed by the application server for analysis and prediction.

4. Application Server

Central to the system, the application server orchestrates data ingestion, validation, transformation, and prediction, leveraging the machine learning model to ascertain potential money laundering activities.

5. Machine Learning Model

Utilizing historical transaction data, the machine learning model employs algorithms like Random Forest, SVM, and Gradient Boosting to detect and predict fraudulent patterns efficiently.

6. Database

The system's backbone for data storage, the database ensures secure and organized storage of transaction data and predictions, facilitating easy access and analysis.

7. Documentation and Collaboration

Comprehensive documentation and a collaborative framework are maintained to support system understanding, maintenance, and enhancements, fostering a cohesive development environment.

8. Conclusion

This High-Level Design document encapsulates the core structure and functionalities of the money laundering prevention system, providing a blueprint for its development, implementation, and ongoing enhancement.