High Level Design (HLD)

(Insurance Premium Prediction) based

System

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Contents

Document Version Control 2

Abstract 4

- Introduction 5
    - Why this High - Level Design Document ? 5
    - Scope 5
    - Definitions 6
- General Description 6
    - Product Perspective 6
    - Problem Statement 6
    - PROPOSED SOLUTION..... 6
    - FURTHER IMPROVEMENTS..... 7
    - Technical Requirements 7
    - Data Requirements 7
    - Tools used 8
        - Hardware Requirements 8
        - **ROS(**Robotic Operating System) 8
    - Constraints..... 9
    - Assumptions 9
- Design Details 9
    - Process Flow 10

        - Model Training and Evaluation 10
        - Deployment Process 10
    - Event log 10
    - Error Handling 10
    - Performance 10
    - Reusability 10
    - Application Compatibility 11
    - Resource Utilization 11
    - Deployment 11
- Dashboards 12
    - **KPIs (**Key Performance Indicators**)** 12
- Conclusion 13

Abstract

The High-Level Design (HLD) document provides a comprehensive overview of the project's structure, functionalities, and technical requirements. It serves as a roadmap for project development, guiding stakeholders in understanding the project's scope, objectives, and architectural design. Through clear and concise summaries, the HLD document aims to facilitate effective communication and collaboration among team members, ensuring alignment with project goals and facilitating smooth implementation.

1. Introduction

1.1 Why this High-Level Design Document?

The High-Level Design (HLD) document serves as a crucial blueprint for the project's development journey. It outlines the project's architecture, functionalities, and technical specifications, providing a clear roadmap for stakeholders and developers. By defining the project's scope, objectives, and constraints, the HLD document ensures alignment with business goals and facilitates efficient decision-making throughout the development process.

The HLD will: - Provide a comprehensive overview of the project's architecture and design.

- Ensure clarity and understanding among stakeholders and development teams.

- Serve as a reference point for making critical decisions throughout the project lifecycle.

- Guide development efforts and ensure alignment with business objectives.

- Facilitate effective communication and collaboration among project stakeholders.

1.3 Definitions

1.3.1 This section provides definitions for key terms and concepts used throughout the document, ensuring clarity and common understanding.

2 General Description

2.1 Product Perspective

This section discusses how the project fits into the larger context, including any dependencies or interactions with other systems

2.2 Problem Statement

The problem statement articulates the specific challenge or issue that the project aims to address, highlighting its significance and impact.

2.3 Proposed Solution

This section presents a high-level overview of the proposed

or approach to addressing the identified problem. It outlines the main components, functionalities, and strategies that will be employed to achieve the project's objectives.

2.4 Further Improvements

Suggestions for future enhancements to augment project capabilities and refine performance for sustained development and user satisfaction.

2.5 Technical Requirements

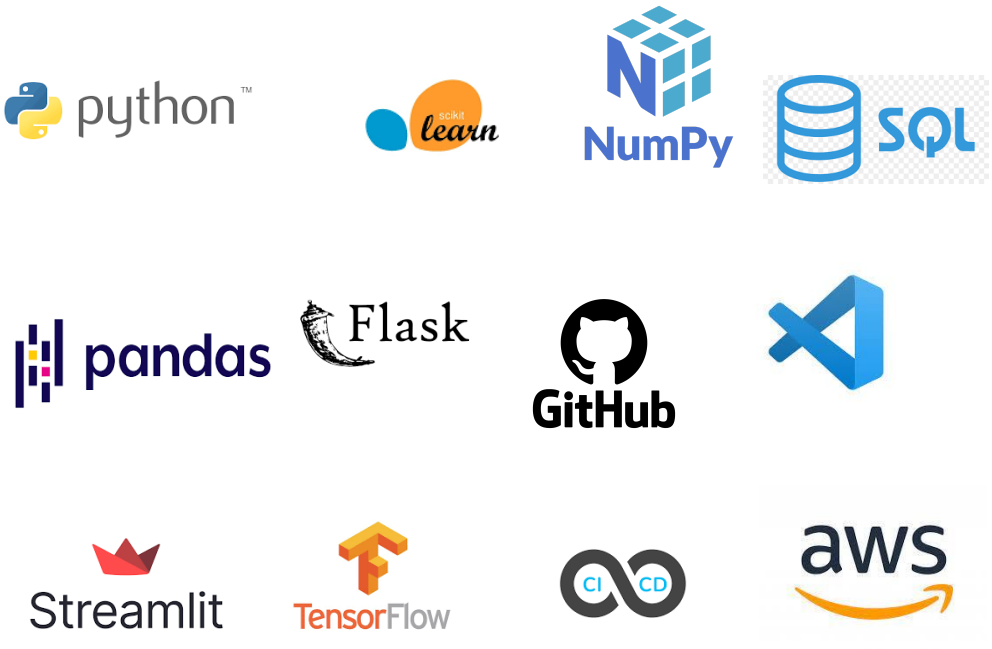
Comprehensive specifications outlining the necessary hardware, software, and tools to facilitate seamless project execution and maintain compatibility.

2.6 Data Requirements

Clear identification of data types essential for project functionality, along with guidelines for effective data collection, storage, and utilization.

2.7 Tools Used

A concise summary detailing the tools, frameworks, and technologies leveraged throughout the project lifecycle to streamline development processes and achieve project goals.



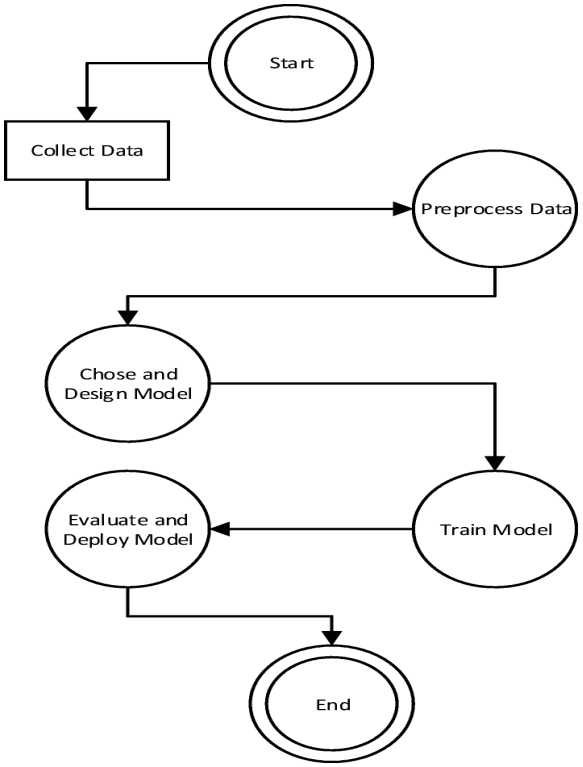
2.8 Constraints

Identification and acknowledgment of any limiting factors, including budgetary, temporal, or technological constraints, to guide project planning and resource allocation.

2.9 Assumptions

Key assumptions made during project inception, providing context for decision-making and guiding project development strategies for optimal outcomes.

3. Design Details



High Level Design (HLD)

3.1 Process Flow:

Detailed elucidation of the sequential workflow, encompassing model training, evaluation, and deployment stages, ensuring a systematic approach to project execution.

3.2 Event Log:

Specification of the event logging mechanism to record system activities, enabling comprehensive analysis and troubleshooting for efficient system monitoring and maintenance.

3.3 Error Handling:

Implementation of robust strategies and mechanisms to detect, report, and address errors and exceptions within the system, ensuring seamless operation and user experience.

3.4 Performance:

Establishment of metrics and benchmarks to assess system performance, including speed, accuracy, and scalability, to

uphold operational efficiency and meet performance expectations.

3.5 Reusability:

Identification of reusable components or modules within the system, facilitating future project endeavors and optimizing development efforts through efficient resource utilization.

3.6 Application Compatibility:

Consideration of factors ensuring compatibility across diverse platforms and environments, guaranteeing seamless deployment and user experience across varied usage scenarios.

3.7 Resource Utilization:

Optimization strategies to maximize hardware resources and minimize overhead, enhancing system efficiency and ensuring optimal utilization of computational resources.

5 Dashboards:

Development of interactive dashboards presenting key performance indicators (KPIs) for monitoring project success, enabling stakeholders to track user engagement, system uptime, and other relevant metrics for informed decision-making.

6 KPI (Key Performance Indicators):

Identification of key performance indicators (KPIs) to measure project success.

Metrics for tracking user engagement and interaction with the system.

KPIs for assessing system uptime and reliability.

Monitoring of data quality and accuracy through relevant metrics.

Measurement of resource utilization and efficiency.

Evaluation of system performance against predefined benchmarks.

Analysis of user feedback and satisfaction metrics.

Tracking of project milestones and progress towards goals.

Identification of areas for improvement based on KPI analysis.

6. Conclusion:

The High-Level Design document provides a comprehensive overview of the project's structure, requirements, and proposed solutions. It serves as a roadmap for development, guiding the implementation process and ensuring alignment with project objectives. By addressing key aspects such as scope, technical requirements, and design details, the document lays the foundation for successful project execution. Additionally, it highlights areas for further improvement and provides recommendations for future work, ensuring the project's continued success and effectiveness.