**Requirements Specifications Document**

**Introduction**

This document aims to outline the specifications required for a Big Data analytics platform designed for a healthcare insurance company. It sets the foundation for the development, detailing expected functionalities, performance, and system integration requirements necessary to achieve strategic business goals through advanced data analytics.

**Purpose**

The purpose of these requirements is to guide the development of a sophisticated analytics platform that leverages Big Data to enhance revenue generation and customer engagement through optimized insurance policy offerings and effective business strategy formulations.

**Intended Audience and Use**

* **Developers:** To understand the technical requirements and system integrations.
* **Testers:** To ensure all functionalities meet the specified requirements.
* **Project Managers:** To oversee the project alignment with business goals and manage the development timeline.

**Product Scope**

The project will enable the company to:

* Analyze vast amounts of data to track customer behavior and market trends.
* Optimize insurance policy offerings.
* Calculate royalties and forecast future claims more accurately.
* Enhance strategic decision-making processes, thereby improving profitability.

**Definitions and Acronyms**

* **Big Data:** Large sets of data that are analyzed computationally to reveal patterns, trends, and associations.
* **ETL (Extract, Transform, Load):** The process of extracting data from different sources, transforming it into a suitable format, and loading it into a target system for analysis.
* **ROI (Return on Investment):** A measure used to evaluate the efficiency or profitability of an investment.

**Overall Description**

This project will develop an add-on platform to the existing IT infrastructure, integrating with current data management systems to enhance analytical capabilities. The platform will utilize Big Data to provide in-depth insights into customer behavior, policy performance, and market trends.

**User Needs**

* **Data Analysts:** Require tools to efficiently process and analyze data to predict customer behavior and optimize policies.
* **Business Strategists:** Need actionable insights from data to inform strategic decisions and tailor marketing approaches.
* **Executives:** Seek comprehensive dashboards and reports that highlight key performance indicators and trends.

**Assumptions and Dependencies**

* Assumes availability of current IT infrastructure including on-premise and cloud solutions.
* Dependent on the continuous availability of internal and external data sources.
* Assumes familiarity of end-users with basic data analysis concepts.

**System Features and Requirements**

**Functional Requirements**

* **Data Ingestion:** Capable of handling real-time and batch data processing from multiple sources.
* **Data Analysis:** Tools for predictive modeling, data segmentation, and trend analysis.
* **Reporting:** Advanced reporting capabilities with custom report generation and visualization tools.

**External Interface Requirements**

* **User Interface:** Intuitive, user-friendly interfaces for both technical and non-technical users.
* **Hardware:** Compatible with existing hardware, scalable to meet future demands.
* **Software:** Integrates with existing data warehouses, databases, and analytical tools.
* **Communications:** Secure data transfer protocols to ensure data integrity and compliance.

**Nonfunctional Requirements**

* **Performance:** High performance with minimal latency.
* **Security:** Robust security protocols including data encryption and access control.
* **Usability:** Easy to navigate interfaces with minimal training required.
* **Scalability:** Easily scalable to handle growing data volumes and user load.