Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	20 October 2023
Team ID	NM2023TMID02554
Project Name	Project - Unleashing the Potential of the Youth: A Student Performance Analysis.
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Input	Implement an Extract, Transform, Load (ETL) process to gather data from various sources, such as databases, applications, and external systems. Use appropriate tools and techniques to integrate the data into a centralized data repository
FR-2	Model and Pre-processing	Clearly understand the problem you want to solve or the question you want to answer through data analytics. This step helps guide the selection of an appropriate model and preprocessing techniques. These preprocessing techniques can be implemented using various programming languages (Python, R, etc.) and libraries (NumPy, Pandas, scikit-learn, etc.) that provide functions and methods specifically designed for data preprocessing tasks.
FR-3	Detection	Detection refers to the process of identifying patterns, anomalies, or specific events of interest within a dataset. There are various techniques and solutions available for detection in data analytics, depending on the specific goals and requirements of the analysis.
FR-4	Evaluation	Apply your data analytics solution to the testing dataset and evaluate its performance using the predefined evaluation metrics. Measure how well your solution achieves the desired outcomes and compare it against the baseline model.
FR-5	Report Generation	Decide on the structure and visual representation of the report. Consider the appropriate charts, tables, graphs, or other visualizations that effectively communicate the insights derived from the data. Ensure the report is easy to understand and visually appealing.

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	It helps to ensure that software is usable, efficient, and effective for users
NFR-2	**Security**	The software should be secure, with measures in place to protect user data and prevent unauthorized access.
NFR-3	**Reliability**	The software should be reliable and dependable. It should be able to analyze data accurately and consistently, and it should not crash or fail frequently.
NFR-4	**Performance**	The software should be able to analyze large volumes of data quickly and efficiently. It should be able to handle complex queries and computations without slowing down.
NFR-5	**Availability**	The software should be available to users whenever they need it. It should not experience frequent downtime or crashes that interrupt user tasks.
NFR-6	**Scalability**	The software should be able to handle increased loads as user numbers grow. It should be designed to handle a large number of users without performance degradation.