

# Software Requirement Specifications

## AI-Driven Student Performance Prediction System



### *Submitted By*

Name: Usama Bilal

Roll No: F22BINFT1E02026

### *Supervised By*

Mr. Muzamil Ur Rehman

*Department of Information Technology*  
*Faculty of Computing*

The Islamia University of Bahawalpur

# **1. Introduction**

## **1.1 Purpose**

This document defines the functional and non-functional requirements of the AI-Based Student Performance Prediction System.

## **1.2 Scope**

The system predicts student performance (Good/Average/Poor) using attendance, grades, assignments, and study habits.

## **1.3 Intended Users**

Teachers, Administrators, Students, Institutions

# **2. Overall Description**

The system integrates machine learning models with a web-based dashboard for predictions and analytics.

# **3. System Requirements**

Functional and non-functional requirements for prediction, visualization, and storage.

# **4. Methodology**

Data collection, preprocessing, training, evaluation, and deployment.

## **5. Tools & Technologies**

Python, Scikit-learn, Streamlit/Flask, CSV/SQLite.

## **6. Expected Outcomes**

Early detection of at-risk students and improved academic decisions.