| REPORT ON  Assignment Submission Scheduling System  **Submitted by: MANUTOSH BENIWAL**  **Date: 18/08/2025** |
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# 1. Introduction

In academic institutions, managing assignment submissions effectively is a recurring challenge. Overlapping deadlines are a common problem for students, which can result in missed assignments, elevated stress levels, and worse academic performance. The goal of this project is to create a scheduling system that uses data analysis and machine learning to anticipate and address assignment deadline conflicts.

In order to improve time management for both students and professors, a scalable, data-driven system that enables assignment tracking, conflict detection, and submission timeline visualization is being developed.

Digital systems that offer flexibility, tracking, and integration with learning management systems have replaced paper submission for assignment management in today's digital learning environment. This has been accelerated by remote and hybrid learning models. In order to preserve academic integrity, provide prompt feedback, and lessen administrative burdens, schools and universities are consequently depending more and more on digital submission tools for assignments.

However, issues like inflexible workflow procedures, a lack of customization, and a limited capacity for conflict detection are often made worse by existing systems. Usually, missed deadlines, duplicate submissions, or ineffective feedback loops would negatively impact both students and teachers. A more advanced, data-driven assignment submission system that not only keeps a close eye on activities but also gives information on submission frequency and deadline conflicts is required due to the limitations.

# 2. Project Overview

Planning and simulating a more complex assignment submission system with synthetic data, a contemporary database design, and machine learning-based conflict detection are the goals of this project. Among the goals are evaluation of the systems for submitting assignments and their shortcomings, using artificial academic data to create a relational data model, and putting in place an SQL database for efficient major operations.

Developing a machine learning algorithm to predict submission conflicts,

Submission trends and deadline overlaps are visualized for insights.

A thorough report complete with database files, code, visualizations, and accompanying documentation will be the end result.

**Overview of the System**

The suggested system for submitting assignments replicates a normal academic setting with lots of users, courses, assignments, and deadlines. The following elements make up the system:

**Functionalities & Features:**

* Monitoring submissions with timestamp logging
* Enforcing deadlines and establishing grace periods
* Integration of early-stage machine learning conflict prediction
* Features for visualizing high-risk due dates and submission obstacles

**Overview of Workflow:**

* Professors assign assignments with due dates.
* Through the system, students submit them.
* The program detects late submissions and timestamps them.
* Conflict detection recognizes when deadlines overlap.
* Administrators resolve conflicts and view visual reports.

**3. Review of Literature**

**Examining Existing Systems**

**1. Moodle**

* Advantages include its open-source nature, modular design, and high degree of customization.
* Negative aspects include a very high learning curve, difficulty scaling to large institutions, and an extremely complex installation.

2. **The Blackboard**

* Advantages: Integrated grading and assessment tools in an enterprise learning management system
* Cons: Very costly, rigid, and generally regarded as outdated in UI design

3. **Google Classroom**

* Advantages include being lightweight, user-friendly, and integrating with Google Drive and Docs.
* Weaknesses: Does not support sophisticated features like bulk upload, analytics, and customizable deadlines.

4. **Turnitin**

* Advantages include robust plagiarism detection and LMS integration.
* Weaknesses: Emphasizing originality checking over full-cycle submission, not an all-purpose manager of assignments

**Important Difficulties Found**

* Overlaps in Deadlines Students who have submitted two or deadlines within constrained time frames
* Limited Notification Systems that don't provide feedback or deadline notifications in real time
* Low adaptability, tight submission guidelines and no late policy configuration