

# **Developing a Web Based Student Information Management System and Predicting Students' Performance**

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## **Abstract:**

Web based Student Information Management System is a very necessary tool for keeping track of students' academic, personal, emergency information. This system can provide a common platform where all the information regarding course curriculum, syllabus, class routines, examination schedules, assignments, grades, academic records, transcripts can be recorded easily, and all the information can be updated regularly using a simple interface. Moreover, by utilizing the records and mining the data from the website, a machine learning based classification model can be implemented to predict students' performance. This will help students easily reach the information they need during their college life. Also, this classification based on students' performance will help the instructor, specially in a large class, to identify students that are at the risk of dropout at an early stage and take measures to assist them with proper care in a timely manner.

## **Objectives:**

1. To provide a simple web interface to keep record of information regarding academia, curriculum, grading etc. where these will also be updated regularly.
2. To provide faculty information as well so that the students can easily reach them.
3. To keep the track of students' attendance so that the instructors can get aware of the students' regularity and notice if any student is getting irregular to take measures accordingly.
4. To mine students' academic record from website and predict students' performance on the upcoming semesters using machine learning classification model e.g., KNN (K Nearest Neighbor)
5. To assist the instructor with the prediction model and help them figure out which students are on the verge of failure so that they can take measure accordingly before it is too late.