Problem Statement Template

1. Please enter the title of the problem statement (less than 10 words)

University Data Analytics

1. A short description of the problem statement (less than 25 words)

Create a simulated dashboard on AWS showing the progress of 5,000 university students on attendance and test scores.

1. Situation (e.g., HR department is manually running attendance of 10,000 employees daily)

Assuming a university still manages all student records manually, a new system needs to be developed that takes in student attendance in each of the 100 subjects offered at the university (assume 50 students enrolled in each subject, 3 classes per week for each subject) along with their scores and grades in each test. Simulate a scenario where a test or evaluation is conducted once a week for each subject and assign marks as a percentage, randomly to each student. Create and gather this dataset on AWS for a quarter and present the data in interactive dashboards that show attendance and scores per subject.

1. Expected outcome (e.g., biometric attendance system across the nation for 50k users, connected to a centralized system with redundancy, increasing HR efficiency by 60%

There will be 2 UIs of the system:

1. A portal that allows the user to create data sets. The user should be able to select subject and week # from a list, and then generate a data set that will be created in back end. The user can also let the system create the whole or remaining dataset with a single click.
2. An interactive dashboard showing student performance and evaluation. Such a system will help the university to instantly get feedback on their programs. The dashboard needs to have visibility of each subject and create custom reports.
3. Third Party integration, if any (yes/no)

None.