# Basic Details of the Team and Problem Statement

Ministry/Organization Name/Student Innovation:
Government of Gujarat.

PS Code: SIH1362

Problem Statement Title: Student dropout analysis for school education

Team Name: Deep Dive Dropouts_TINT

Team Leader Name: Anwarul Haque

Institute Code (AISHE): C-6198

Institute Name:  Techno International Newtown

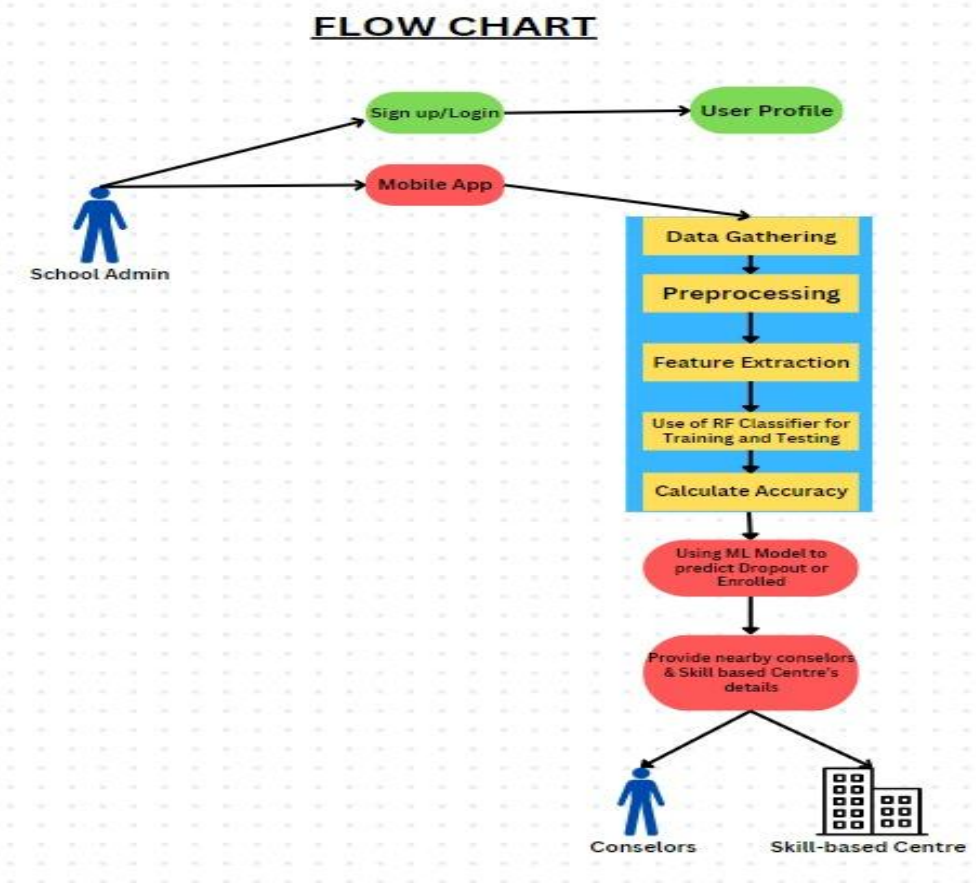
Theme Name: Smart Education

# Idea/Approach Details

## Describe your idea /Solution /Prototype here

We are trying to find a solution by developing a mobile app-based application that will serve as a thorough analysis of the factors contributing to student dropouts in Indian schools and propose data-driven solutions to reduce dropout rates, ensuring a brighter and more equitable future for all students and society at large.

- Conducting data analysis to identify the **correlation** between various **features** and their **influence on dropout rates**.
- Relevant features from the dataset are extracted.
- The data is trained and tested using the **Random Forest classifier** to predict the likelihood of student dropout.
- Evaluate model performance.
- Using the ML model, users can input data to **predict** whether the student will dropout or not based on the provided features.
- Integrating the model on a **mobile-app** for easy access to users.
- Enabling **counselors** and **skill-based centers** to join the app to **prevent student dropouts** and offer **skill-focused training** respectively.




## Describe your Technology stack here:

- **Language used** – Java, Python
- **Verification and Executions** – Google Colab, Android Studio
- **Database** – MySQL

# Idea/Approach Details

## Describe your Use Cases here

- **Comprehensive school improvement:** Implementing initiatives for comprehensive school improvement can aid in lowering the school dropout rate.
- **Particularized Counselling and Support:** Allow educators to focus their efforts on students who are more likely to drop out and offer them specialized counseling and mentorship.
- **Detecting at-risk students early:** Teachers can spot students who are at danger of dropping out and provide them with the support and interventions they need by evaluating student data such as academic performance, attendance, and behavior.
- **Providing academic and emotional support:** Giving at-risk students academic and emotional support can help them do better in school and feel more a part of the community.

## Describe your Dependencies / Show stopper here

- The analysis should consider individual and school factors as well as the dropout status of students.
- It is necessary to gather relevant data about students, including their academic achievement, attendance, socioeconomic status, and institutional aspects.
- The preprocessed data must be used to train the chosen machine learning model.
- The model is trained using the training set after partitioning the data into training and testing sets.

# Team Member Details

**Team Leader Name: Anwarul Haque**

Branch (Btech/Mtech/PhD etc): Btech

**Team Member 1 Name:  Faisal Shamim**

Branch (Btech/Mtech/PhD etc): Btech

**Team Member 2 Name: Poushali Ghosh**

Branch (Btech/Mtech/PhD etc): Btech

**Team Member 3 Name: Piyush Kumar Byahut**

Branch (Btech/Mtech/PhD etc): Btech

**Team Member 4 Name: Tahseen Atique Ali**

Branch (Btech/Mtech/PhD etc): Btech

**Team Member 5 Name: MD Mujtaba**

Branch (Btech/Mtech/PhD etc): Btech