School Buddy Case Study

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Introduction

School Buddy is a new startup dedicated to helping students make informed decisions when selecting schools based on their stream preferences. The startup aims to guide students in choosing the best schools by analyzing academic performance data.
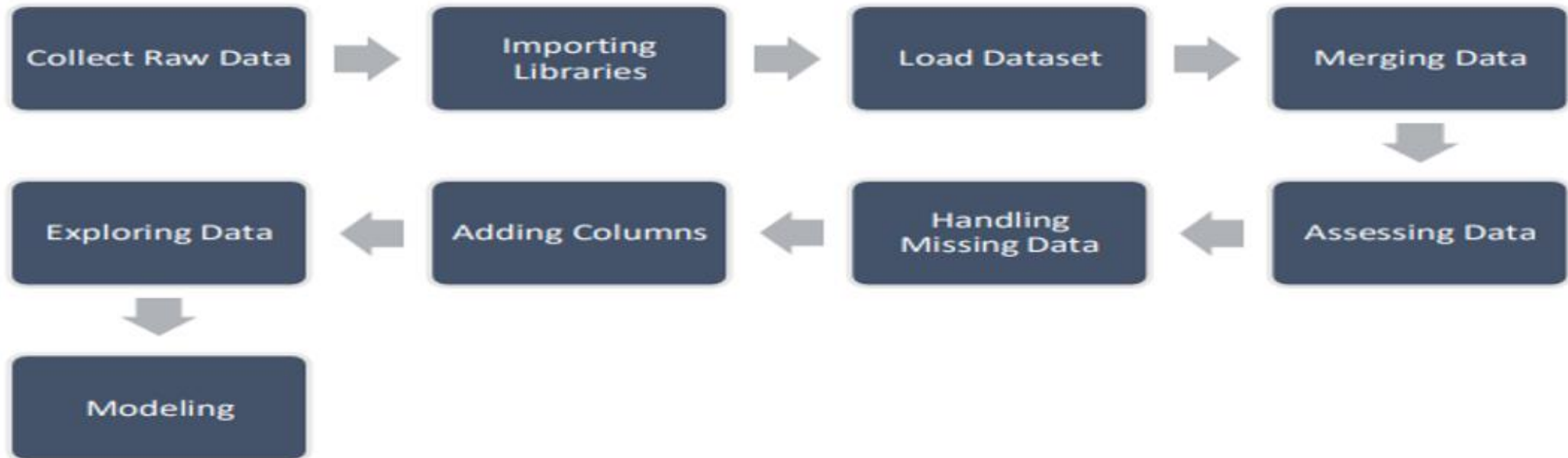
Objectives:

The primary goal is to analyze the academic data collected over the past three years from multiple schools and provide insights to identify the top-performing schools and students. This will help students and parents make better decisions based on their academic preferences and strengths.

Details of Data

- Bangalore school 2019.xlsx
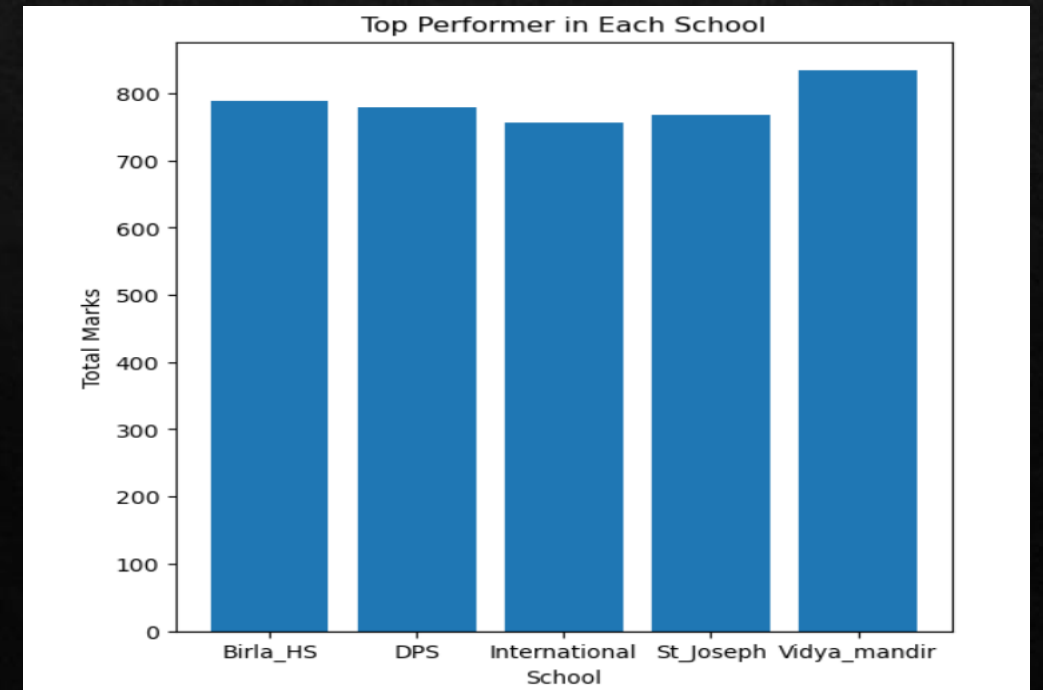- Bangalore school 2020.xlsx
- Bangalore school 2021.xlsx

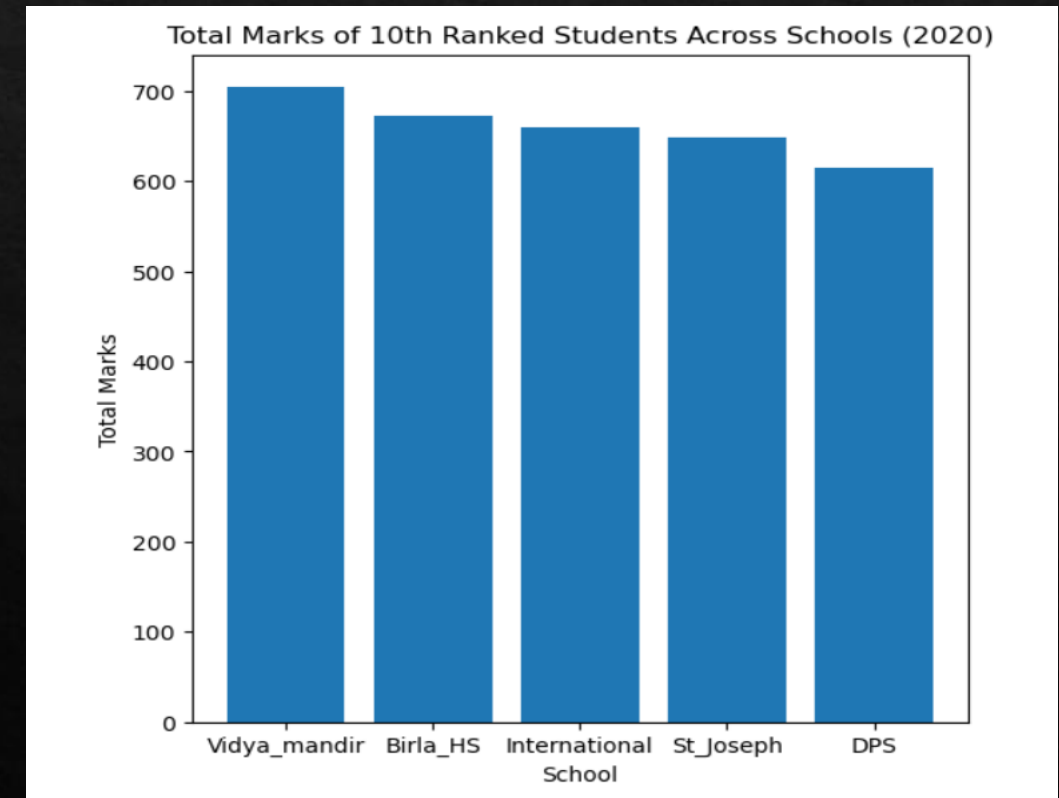# Architecture

Some Important Insights Using Python:

1. Reward the top performer (student) of each school based on cumulative marks scored in last three years for all the subjects

School	Student Roll	Student Name	Total_Marks
Birla_HS	4010	Hashmukh Patel	789
DPS	3010	Devanshu Mishra	780
International	5008	Atin Choudhari	756
St_Joseph	2011	James Gabriel	768
Vidya_mandir	1005	Raju Deshmukh	835

Top Performer in Each School

2. Rank each student within their own school based on their total marks scored in the year 2020 and compare the marks of Rank 10 for each school by arranging them in descending order

School	Total_Marks	Student Name
Vidya_mandir	705	Ganesh Sekhar
Birla_HS	673	Derek Pinto
International	660	Jashwant Bhide
St_Joseph	649	Deep Dasgupta
DPS	614	Michel Dsuza

Total Marks of 10th Ranked Students Across Schools (2020)

3. Find out students with the highest improvement for each subject from 2019-21 combining all the schools together

Hindi:
Student Name: Sonal Tripathi
Roll No: 1011
School: Vidya_mandir

English:
Student Name: Besent Kumar
Roll No: 3005
School: DPS

Mathematics:
Student Name: Manyathi Shetty
Roll No: 3008
School: DPS

Computer Science:
Student Name: Rashmi Desai
Roll No: 1017
School: Vidya_mandir

Physics:
Student Name: Praddep Meena
Roll No: 1013
School: Vidya_mandir

Chemistry:
Student Name: Manshukh Bhayani
Roll No: 3020
School: DPS

Biology:
Student Name: Nitin Deewan
Roll No: 4019
School: Birla_HS

History:
Student Name: Rahul Bansal
Roll No: 2004
School: St_Joseph

Geography:
Student Name: Subhajeet Dutta
Roll No: 1010
School: Vidya_mandir

Civics:
Student Name: Sanjana Venkatramana
Roll No: 1018
School: Vidya_mandir

Physical Education:
Student Name: Anamika Kumari
Roll No: 1008
School: Vidya_mandir

4. Identify best school for Arts, Science and Commerce streams based on marks scored by students in respective subjects for those streams in last three years
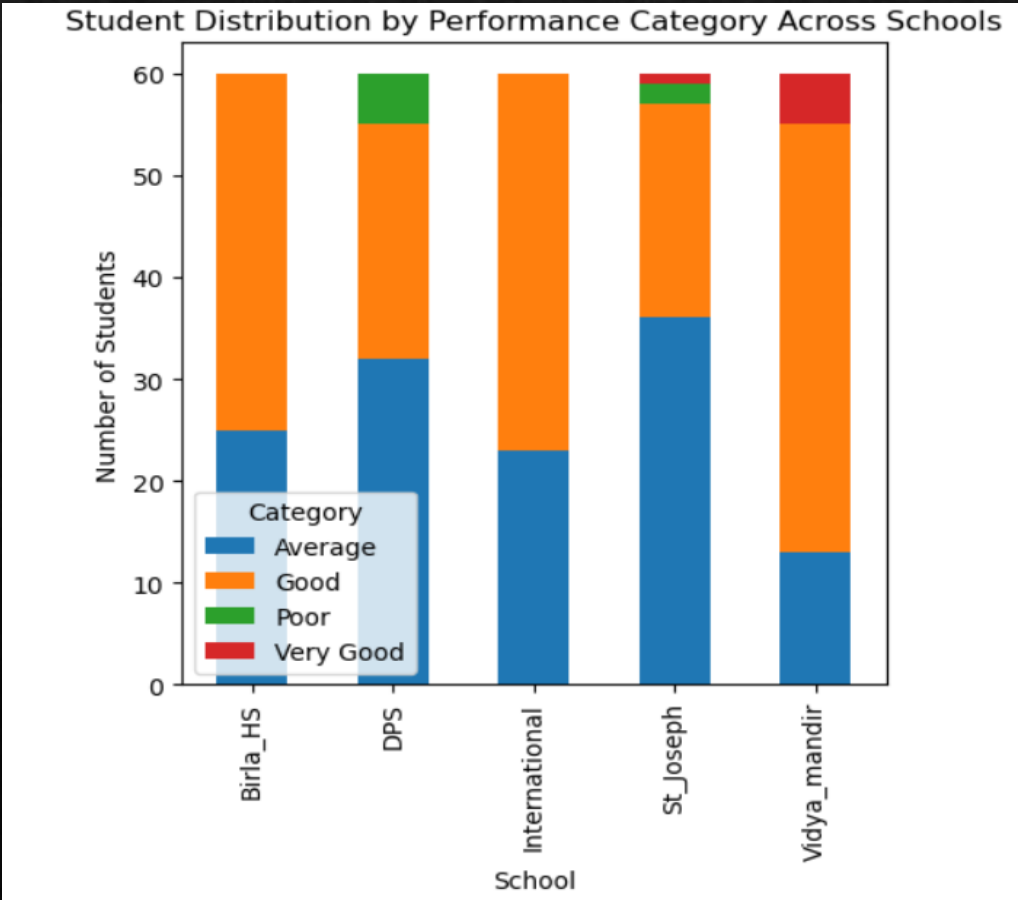
Arts: Birla_HS

Science: International

Commerce: Vidya_mandir

5. If the marks obtained for each subject can be categorised under 5 sections.Then calculate for each school how many students were in each category based on the avg. marks obtained each year

Category School	Average	Good	Poor	Very Good
Birla_HS	25.0	35.0	0.0	0.0
DPS	32.0	23.0	5.0	0.0
International	23.0	37.0	0.0	0.0
St_Joseph	36.0	21.0	2.0	1.0
Vidya_mandir	13.0	42.0	0.0	5.0

Student Distribution by Performance Category Across Schools

6. Which is the best school for each year 2019, 2020 and 2021 based on highest no. of students in Good and Very Good category

Year 2019: Best school is **International** with 15.0 students.

Year 2020: Best school is **Vidya_mandir** with 15.0 students.

Year 2021: Best school is **Vidya_mandir** with 20.0 students .

7. Which is the fastest-growing School in Bangalore (Overall and Streamwise)?

Fastest-growing school by stream:

Arts: Vidya_mandir
Science: International
Commerce: St_Joseph

Fastest-growing school overall: Vidya_mandir

Conclusion:

- **Insights and Outcomes:** The analysis will reveal the top-performing students and schools, show trends in academic improvement, and highlight the best schools in Arts, Science, and Commerce. The findings will help guide students in making well-informed decisions for their academic future.

- **Next Steps:** Preparation of a detailed report and presentation of the findings to the senior management of School Buddy for strategic planning and implementation.

Thank You.