PSG INSTITUTE OF TECHNOLOGY AND APPLIED RESEARCH
COIMBATORE

Department of Computer Science and Business Systems

Mini-Project Review

VISUALIZING STUDENT MARKS USING PYTHON

Submitted By

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Department of CSE

PROJECT

STUDENT MARK VISUALIZATION

Problem Statement

Educational institutions often face challenges in effectively analyzing and understanding student performance based on individual marks scattered across different subjects and time periods. The absence of a comprehensive and intuitive visualization system hinders educators and administrators from gaining valuable insights, identifying trends, and making informed decisions to support student success. Therefore, there is a need for a student mark visualization solution that integrates, consolidates, and presents student mark data through interactive visualizations, enabling stakeholders to analyze performance, identify areas for improvement, and drive educational strategies effectively.

Abstract

- The code combines student marks from different sources, providing a comprehensive view of academic performance.
- The code presents student marks through interactive graphs and charts, making it easy to explore and understand the data visually.
- The code includes features for analyzing student performance and identifying trends, helping educators and administrators make informed decisions to support student success.

Introduction

- Purpose: The aim of this project is to develop a student mark visualization code that provides a clear and intuitive representation of academic performance.

- Benefits: Visualizing student marks offers valuable insights for educators, administrators, and students, enabling them to identify trends, make informed decisions, and improve educational outcomes.

- Approach: The code integrates and consolidates student mark data from various sources, presenting it through interactive visualizations that are easy to explore and understand

- Impact: By empowering stakeholders with data-driven insights, this project has the potential to drive positive changes in educational practices, fostering student success and institutional growth.

MODULES USED

- Plotly: Python Plotly Library is an open-source library that can be used for data visualization and understanding data simply and easily.

- Pandas: Python pandas is a fast ,powerful,flexible and easy to use open source data analysis and manipulation tool,built on top of the python programming language .

- Streamlit : Streamlit is an open-source Python library that allows developers to build interactive web applications for data analysis and visualization. With its simplicity and ease of use, Streamlit empowers users to create dynamic and intuitive interfaces with just a few lines of code.

Pre-requisites

Hardware

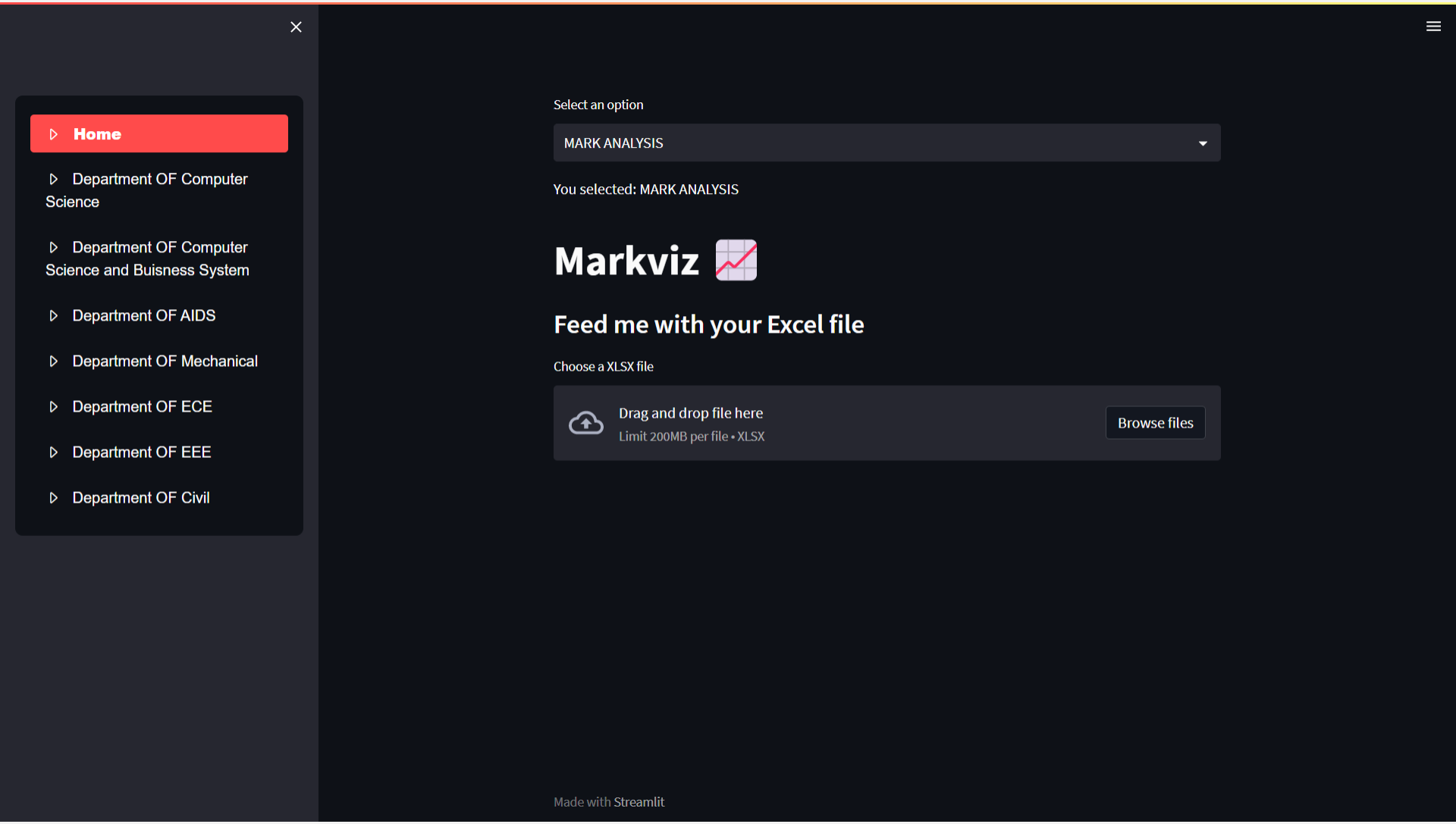
- Windows 10 64-bit OS
- 8-16 GB RAM
- 512 GB SSD

Software

- Jupyter Notebook
- Python Language
- Data Visualizing Libraries

Conclusion

The student mark visualization code presented in this project offers a powerful tool for educational institutions to gain insights into academic performance. Through data integration, interactive visualizations, and performance analysis, educators and administrators can make informed decisions, identify areas for improvement, and support student success. With its user-friendly implementation and potential for positive impact, this code serves as a valuable resource for enhancing educational practices and fostering continuous improvement.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MARK ANALYSIS
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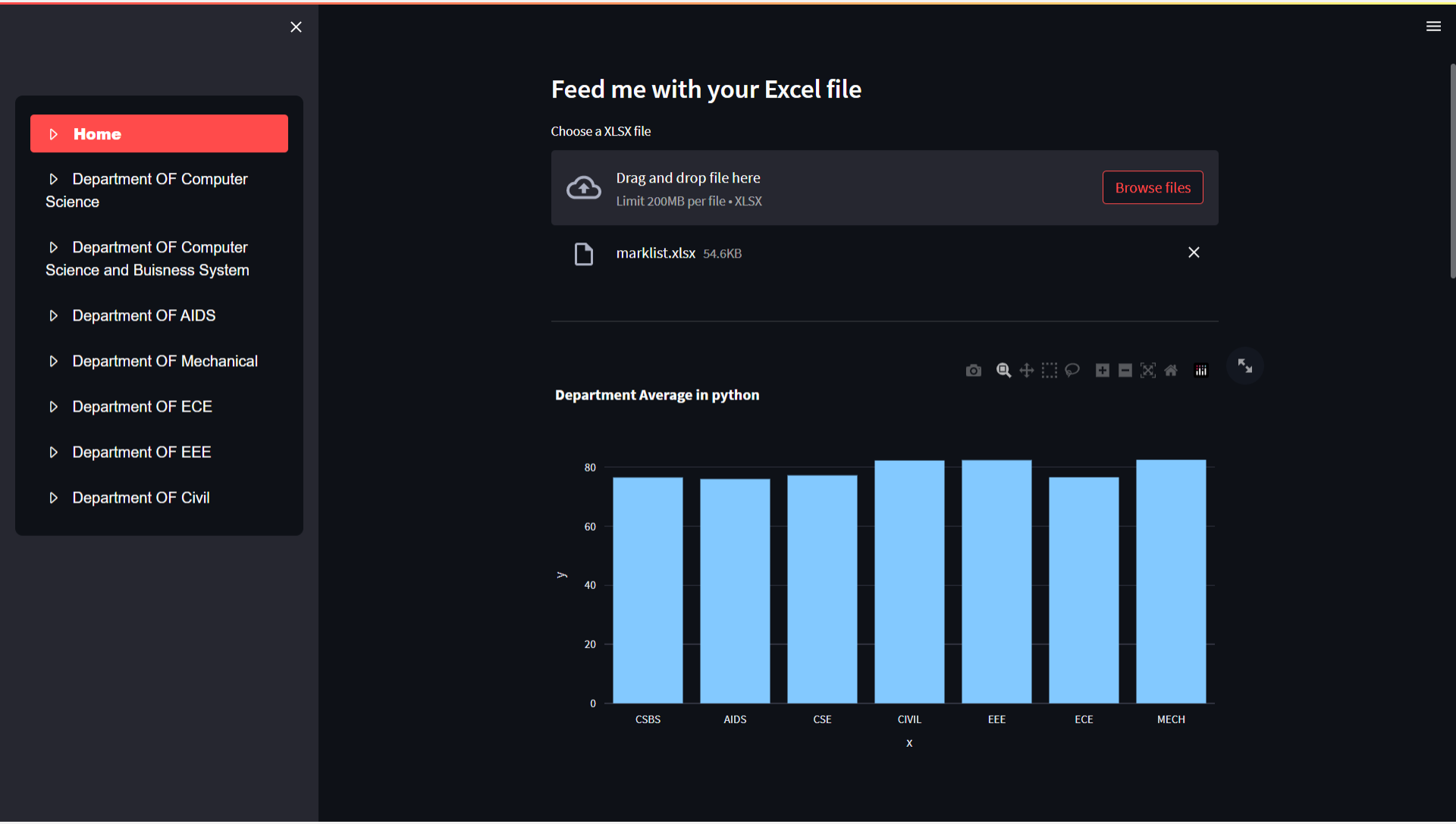
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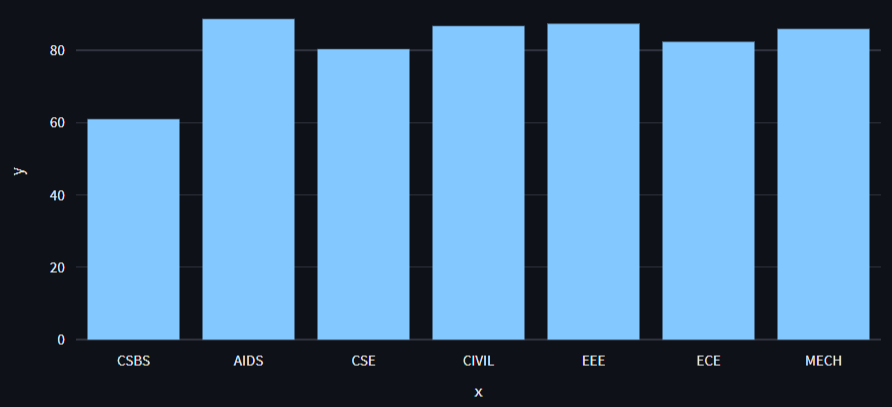
Department Average in mathematics



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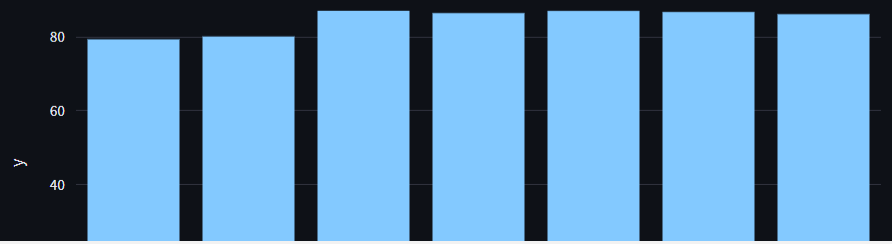

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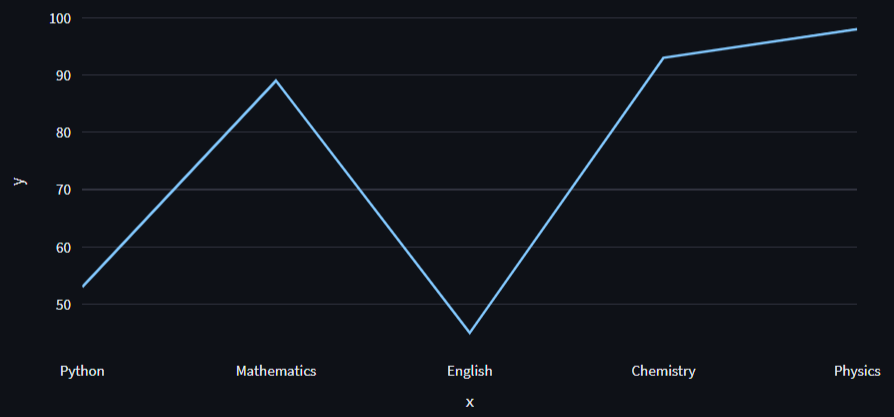
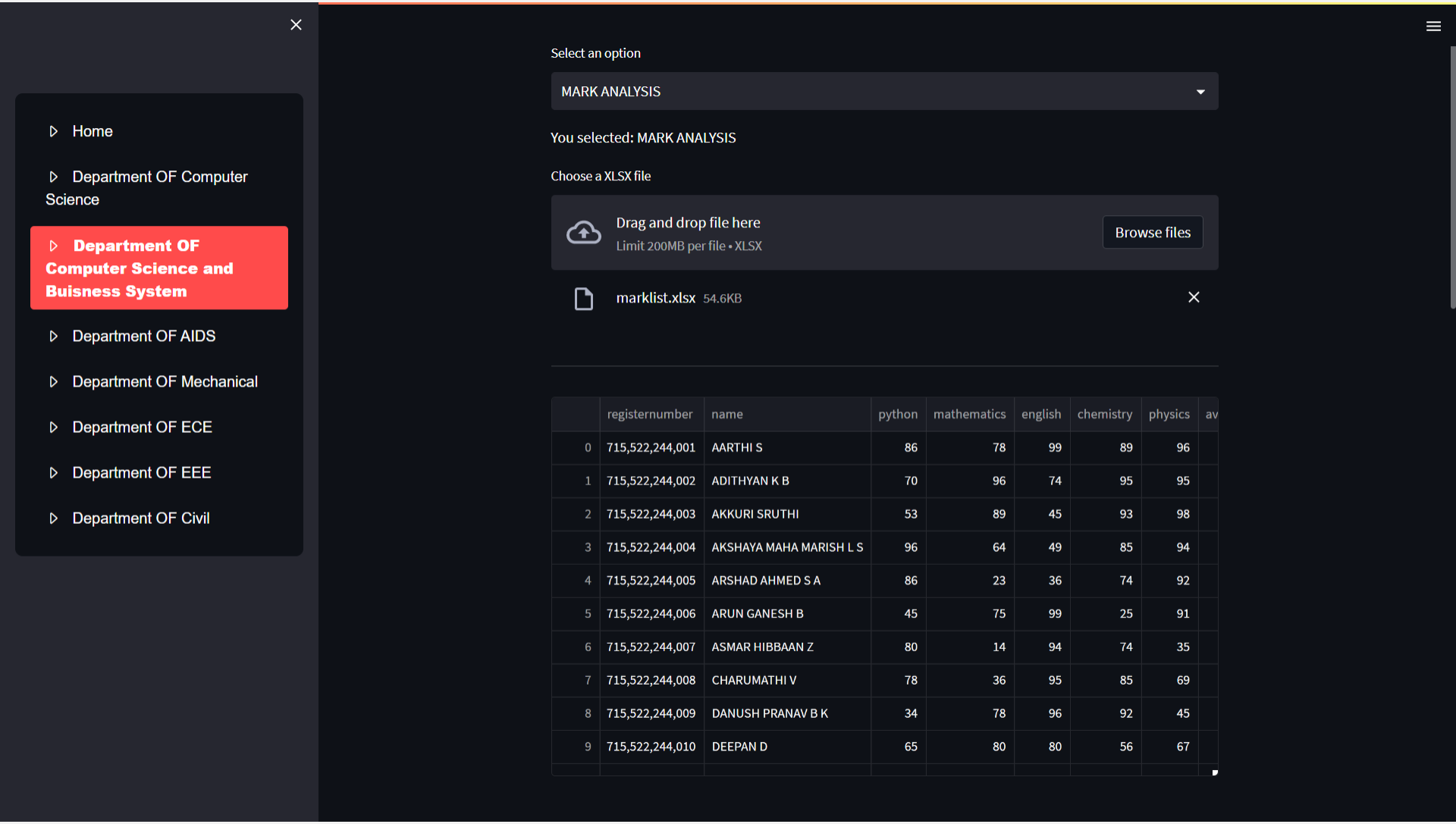
MARKS VISULIZATION OF AN INDIVIDUAL

ENTER THE NAME OF THE STUDENT :

KARTHIKEYAN S

MARKS OF THE STUDENT YOU HAVE ENTERED





	registernumber	name	python	mathematics	english	chemistry	physics	av
0	715,522,244,001	AARTHI S	86	78	99	89	96	
1	715,522,244,002	ADITHYAN K B	70	96	74	95	95	
2	715,522,244,003	AKKURI SRUTHI	53	89	45	93	98	
3	715,522,244,004	AKSHAYA MAHA MARISH L S	96	64	49	85	94	
4	715,522,244,005	ARSHAD AHMED S A	86	23	36	74	92	
5	715,522,244,006	ARUN GANESH B	45	75	99	25	91	
6	715,522,244,007	ASMAR HIBBAAN Z	80	14	94	74	35	
7	715,522,244,008	CHARUMATHI V	78	36	95	85	69	
8	715,522,244,009	DANUSH PRANAV B K	34	78	96	92	45	
9	715,522,244,010	DEEPAN D	65	80	80	56	67	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PYTHON
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HIGHEST MARKS IN EACH SUBJECTS
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Mathematics
English
Chemistry
Physics
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TOP 5 STUDENTS WITH HIGHEST AVERAGE MARKS IN THEIR SUBJECTS

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TOP 5 STUDENTS WITH HIGHEST AVERAGE MARKS IN THEIR SUBJECTS

name	average
AARTHI S	89.6
JASON S	89.6
MIRIAM ROSE XAVIER	89.6
SATHYA K C	89.6
ADITHYAN K B	86


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CSBS
AIDS
CSE
CIVIL
EEE
ECE
MECH

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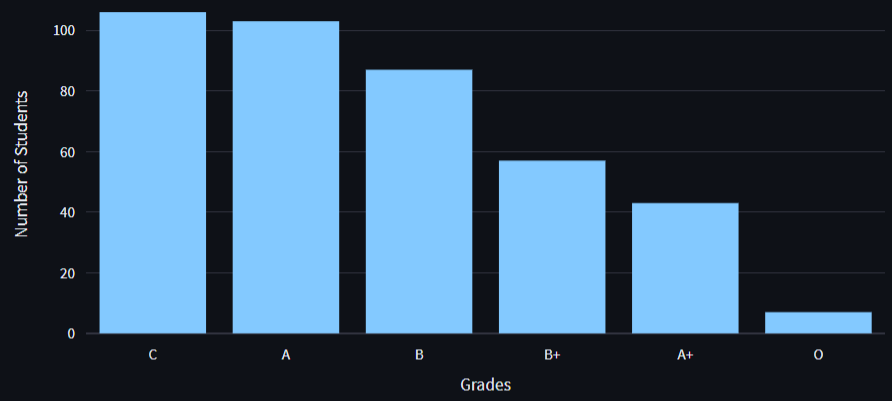
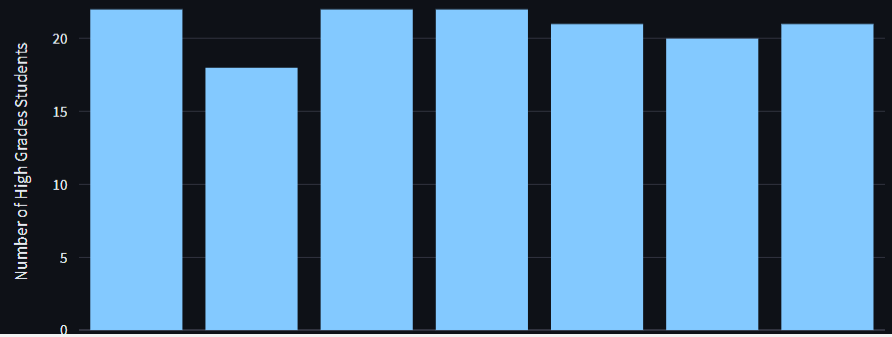
Number of Students in Each Grade



Number of High Grades Students in Each Department

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Grade Distribution for AIDS
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Thank You!