Tech Saksham

Final Project Report

Artificial Intelligence

“A-RAY (Accumulated Reports Analysis for Youth)”

“Government College Of Engineering Nagpur ”

Team member’s detail			
Roll.No.	**Participant Name**	**Mobile No.**	**Email ID**
2	Aditi Agwan	+919325401079	***agwanaditio2@gmail.com***
4	Alefiya Sanawadwala	+918237868575	***tgalefiyahsanawadwala@gmail.com***
22	Riddhi Hedaoo	+918698888662	***ridhed2311@gmail.com***
Mentor details			
S.No.	**Mentor Name**	**Mobile No.**	**Email ID**
1	Balwant Gorad	+919604060809	***goradbj@gmail.com***

Mr. S.S. Ahmed Ali

Master Trainer

ACKNOWLEDGEMENT

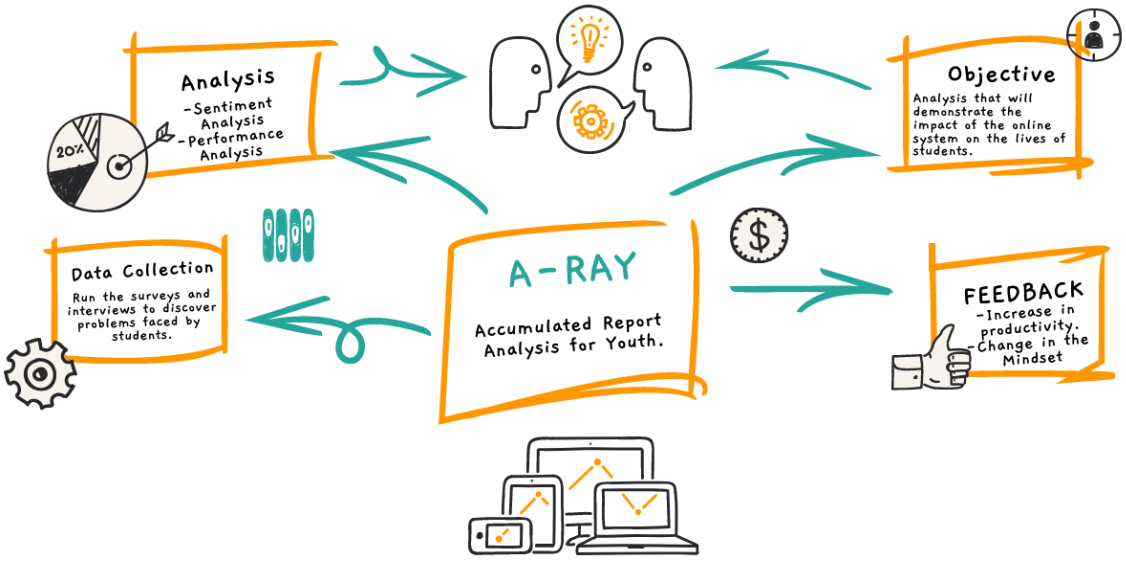
We would like to express my sincere gratitude to several individuals and organizations for supporting me throughout my **Artificial Intelligence** from TechSaksham Program. First, I wish to express my sincere gratitude to my trainer, Mr. S.S. Ahmed Ali, for his enthusiasm, patience, insightful comments, helpful information, practical advice and unceasing ideas that have helped me tremendously at all times in my study and writing of this project report. His immense knowledge, profound experience and professional expertise in computer science has enabled me to complete this project successfully.

I also wish to express my sincere thanks to the **Government College of Engineering, Nagpur** for providing me into the TechSaksham program. In addition, I am deeply indebted to the Microsoft and SAP for granting me the TechSaksham Program from support of EDUNET foundation Team.

I am also grateful to the following Program Co-ordinator **Mrs Latesh Malik and Mr Rewatkumar Borkar** for their consistent support and assistance.

ABSTRACT

Analysis of productivity and sentiments based on data gathered from students. Student's perspectives during a pandemic will be used as input for sentiment analysis, while students' everyday routines would be used for performance analysis. The purpose of the project is to gather details from students and compile them into a dataset. It then analyzes the sentiments in their respective fields and generates the report graphically. The aim of this project is to increase the productivity of youth towards their interest and guide them in better understanding of the emotiional issues faced by them in the online system.



INDEX

Sr. No.	Table of Contents	Page No.
1	Chapter 1: Introduction	1-4
2	Chapter 2: Technologies Used	5
3	Chapter 3: Project Architecture	6
4	Chapter 4: Architecture Blocks Detail Working	
5	Conclusion	
6	References	
7	Code	

CHAPTER 1

INTRODUCTION

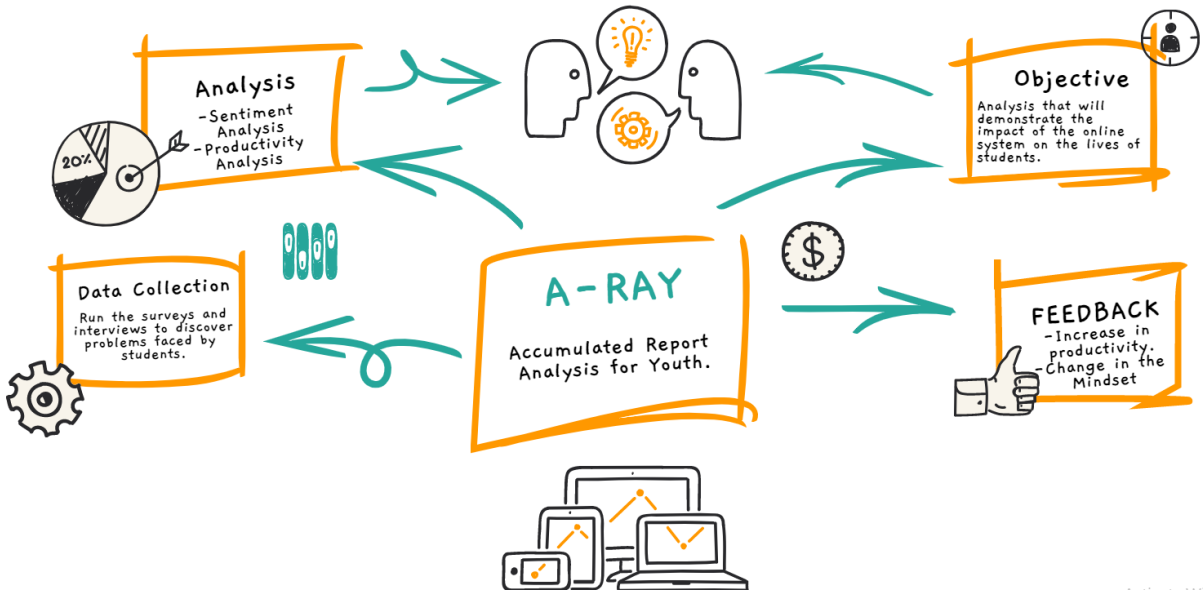
1.1 Overview

Prior to Corona, classes were held in a physical setting, requiring student interaction and attention. There were no tiering schedules, and there was also physical interaction from students. However, after Covid'19, when everything went online, all of the activities began to take place online. Students were forced to sit in front of a screen, which resulted in a variety of health problems such as headaches, eye strain, and back pain. The need for devices to attend classes, as well as Wi-Fi charges, increased the costs. In our project,

- We will analyse such problems and attempt to depict the hazardous effects of them as well as the progress made as a result of them.
- The solution is to analyse the hazards and generate a report by collecting data from students and presenting it graphically.
- The analysis will be based on students' mental health and fatigue routines, as well as other issues such as financial issues, network connectivity, and a massive workload.

1.2Feature

To address the above mentioned issue, we decided to compile a report on the issues encountered by each stakeholder in the online educational system and analyse the data to create a graph. This analysis will aid in the resolution of this problem and the depiction of the progress report as a result of the online system. The data used will be real-time information gathered from students.



1.3Advantages

The purpose of this study was to determine the extent of several elements that were supposed to make it difficult for students to stay on track with their academics during COVID-19 lockdown. The poll went on to explore a variety of issues that could make learning difficult during the lockdown, including the regularity of online classes, the ability to attend classes, online lecture comprehension, internet connection, home environment, excitement, and motivation. The research

also raised concerns about a lack of physical activity, which has been shown to have a negative impact on mental learning.

Furthermore, one-on-one interaction between the learner and the teacher is not always successful in online classrooms, which could be one of the causes for a lack of comprehension of the lecture. It was shown that the majority of students lacked passion for their studies, and a few students lacked motivation to take additional steps for obtaining information by researching online education assets. As the college atmosphere has deteriorated, students are less likely to engage in subjective activities in their daily activities, resulting in a loss of subjective orientation.

1.4 Scope

The survey was carried out in the English language. Participants' response to the invitation was considered to imply consent. The survey was conducted among college-going undergraduate and postgraduate students from the various regions of Maharashtra, in India.

Since online classes were not commonly practiced in India as mainstream teaching methods, it was important to introduce such a method suddenly during an emergency to avoid the loss of education, but it also brought a number of challenges for students to adapt to this learning mode.

The research came to a conclusion that students are having difficulty studying during the lockdown, which is leading to the development of mental stress as a result of the uncertainty surrounding their studies and completion of the syllabus, as well as their comprehension of subjects. This tension can cause

panic, causing pupils to make unhealthy and rash actions in order to escape disappointment or failure. In addition, the study found that pupils' mental learning is being harmed by fewer physical activity.

1.5 Future Work

2 Future research could, hence, include a broader range of sources of data.
3 Furthermore, future studies could also consider the meaningfulness to adopt newly developed COVID-19-related instruments to test concurrent validity.
4 Consequently, future studies could be designed with the aim to also conduct test-retest analysis.
5 Consequently, further applications of this project in other countries are needed to allow gaining further information about sources of stress influencing students' wellbeing according to different countries worldwide.
6 Developing tailored interventions fostering students' wellbeing and supporting efforts to understand the impact of this unique global crisis.

CHAPTER 2

Technologies used

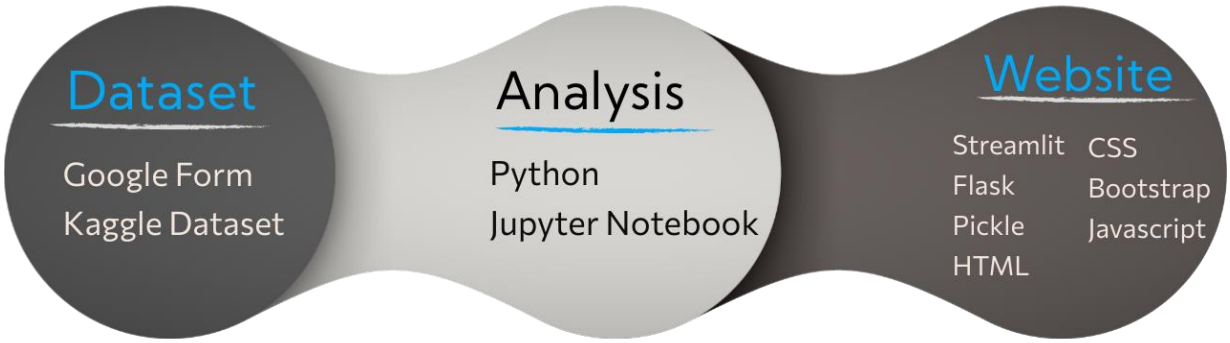
Hardware requirements

HP laptop featuring an Intel(R) Core(TM) i5-10210U processor, a 64-bit operating system, and 4 GB of RAM.

Software requirements

For analysis and graph representation

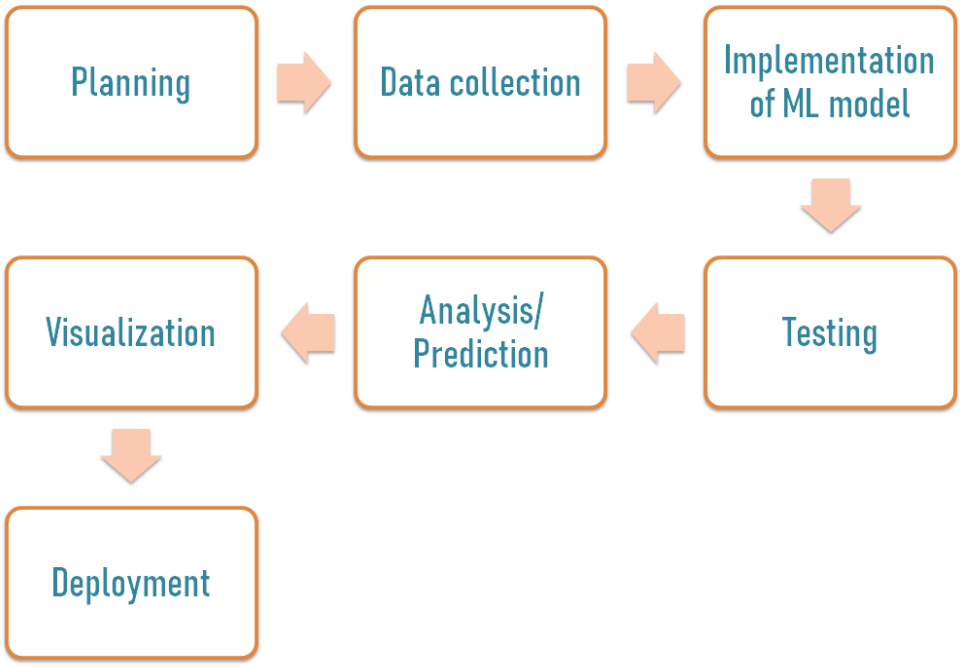
- Languages:- Python.
- Data Collection Tool:- Google form
- Kernel:- Linux.
- Python IDE:- Anaconda , Jupyter Notebook
- Data Analysis Tool:- PowerBi

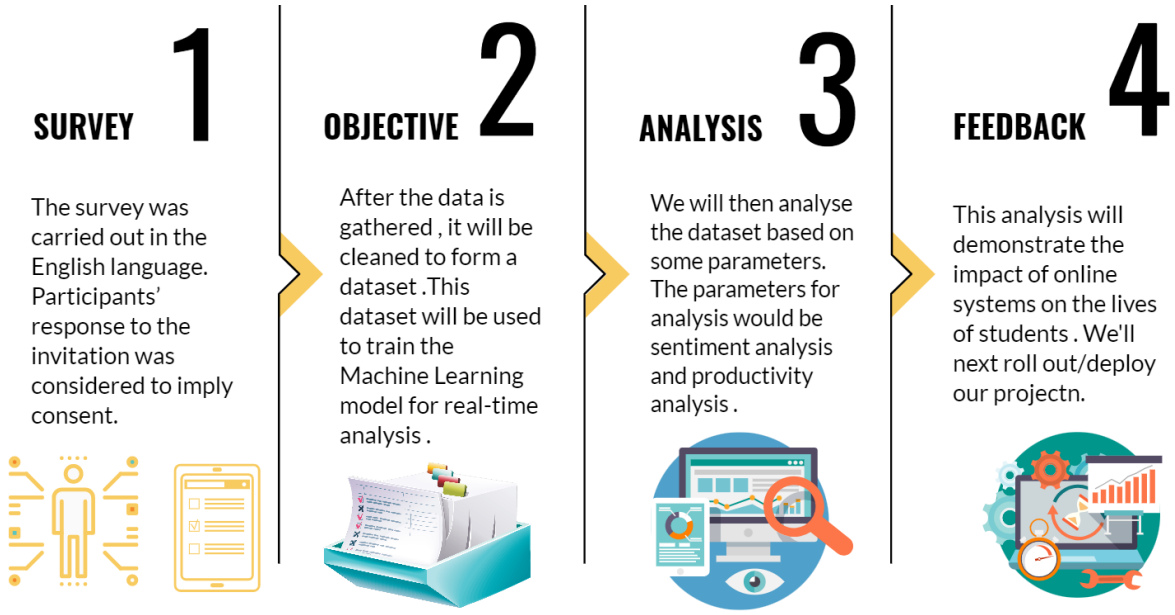


CHAPTER 3

PROJECT ARCHITECTURE

3.1 Architecture

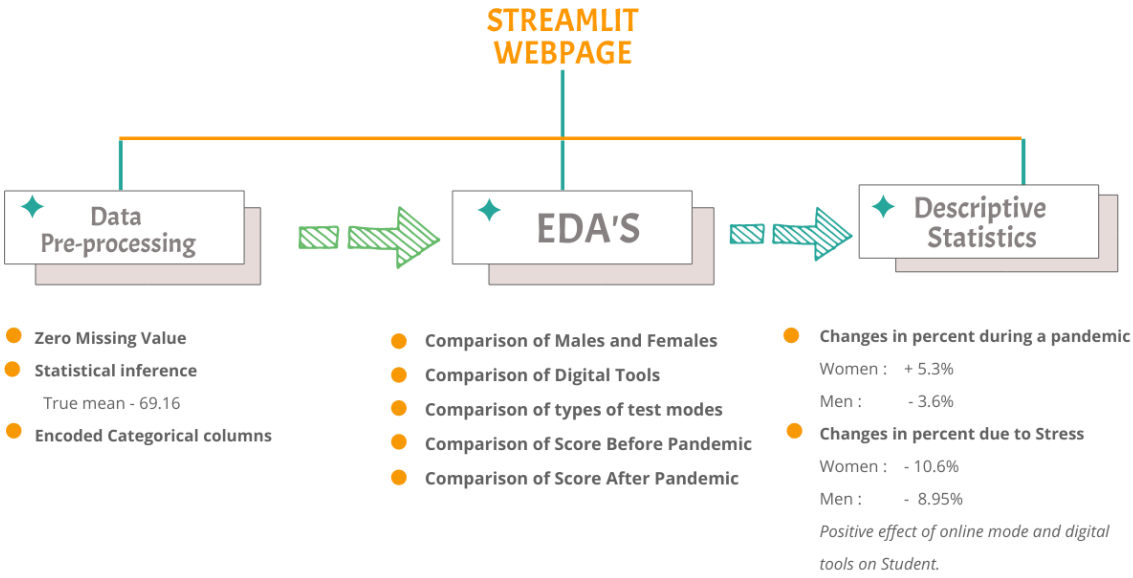




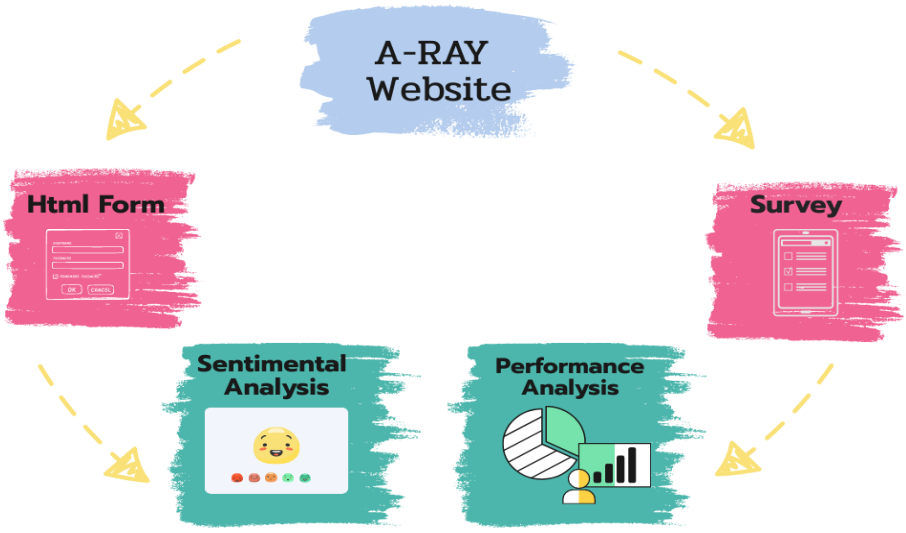
CHAPTER 4

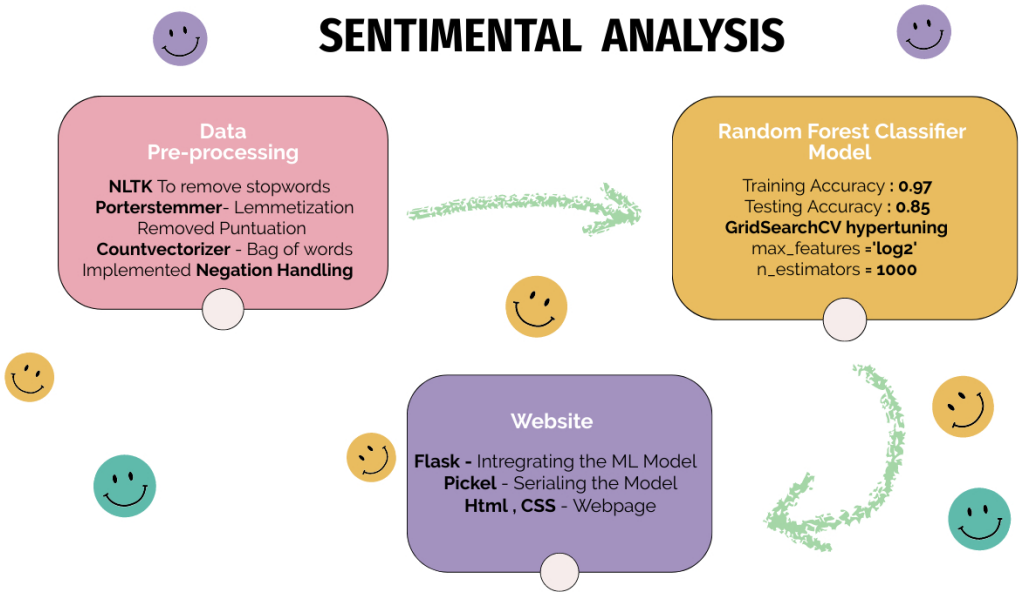
ARCHITECTURE BLOCKS DETAIL WORKING

4.1 Blocks



- Dataset-These are the websites that we use to collect/gather our dataset form. You may be wondering why I included a Google Form in it. This is due to the fact that we used a Google form to collect data for performance analysis. We did this to ensure that the dataset contained the correct emotions of students and came from the intended audience.
- Analysis- For analysis, We used the Python programming language for analysis and the Jupyter notebook for editing.
- Website- These are the tools we employ to create a stunning website that features interactive graphs for performance analysis and sentimental analysis.





The project analysis is divided into two parts: performance analysis and sentimental analysis.
So let's start with performance analysis.
We created a streamlit website to plot correlations between different columns. We'll get to see these exploratory data analyses later on the website.
Let's move on to the second part of our algorithm, sentimental analysis.
In this case, we used an HTML form created by one of my team members.We were successful in implementing negation handling in our model.

CONCLUSION

The survey was carried out in the English language. Participants' response to the invitation was considered to imply consent. The survey was conducted among college-going undergraduate and postgraduate students from the various regions of Maharashtra, in India.

Since online classes were not commonly practiced in India as mainstream teaching methods, it was important to introduce such a method suddenly during an emergency to avoid the loss of education, but it also brought a number of challenges for students to adapt to this learning mode.

The purpose of this study was to determine the extent of several elements that were supposed to make it difficult for students to stay on track with their academics during COVID-19 lockdown. The poll went on to explore a variety of issues that could make learning difficult during the lockdown, including the regularity of online classes, the ability to attend classes, online lecture comprehension, internet connection, home environment, excitement, and motivation. The research also raised concerns about a lack of physical activity, which has been shown to have a negative impact on mental learning.

Furthermore, one-on-one interaction between the learner and the teacher is not always successful in online classrooms, which could be one of the causes for a lack of comprehension of the lecture. It was shown that the majority of students lacked passion for their studies, and a few students lacked motivation to take additional steps for obtaining information by researching online education assets. As the college atmosphere has deteriorated, students are less likely to engage in subjective activities in their daily activities, resulting in a loss of subjective orientation.

The research came to a conclusion that students are having difficulty studying during the lockdown, which is leading to the development of mental stress as a result of the uncertainty surrounding their studies and completion of the syllabus, as well as their comprehension of subjects. This tension can cause panic, causing pupils to make unhealthy and rash actions in order to escape disappointment or failure. In addition, the study found that pupils' mental learning is being harmed by fewer physical activity.

REFERENCES

COVID-19 Student Stress Questionnaire
https://www.frontiersin.org/articles/10.3389/fpsyg.2020.576758/full

Frontier In Psychology|Article

COVID-19 Lockdown: Challenges Faced by Indian Students
https://www.frontiersin.org/articles/10.3389/fpsyg.2020.576758/full

SpringerLink|Article

COVID-19 Data in the Classroom

https://chance.amstat.org/2020/09/covid-19-in-the-classroom/

CHANGE|Article

Impact of the COVID-19 pandemic on the social and educational aspects

https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0250026

PLOS ONE|Article

Evaluation and Prediction of Student's Academic

Performance during Covid-19

https://towardsdatascience.com/evaluation-and-prediction-of-students-academic-performance-during-covid-19-40bb2b90141b

Towards DS|Blog

CODE,DATASET

https://github.com/Aditi-Agwan/A-RAY