1 INTRODUCTION

1.1 Overview

Every aspect of humanity has been impacted by the epidemic. A more significant influence of COVID- 19 was felt in the education sector. The traditional classroom setting is extremely important in shaping a person's life. Beforehand- life connections serve as a vital source of moral support as the trip's final stages approach.

1.2 Purpose

The analysis of data attempts to examine the goods of online education since the epidemic has impelled us to pursue it. A review was done to see if the learners' proficiency situations were satisfactory.

- **Specify The Business Problem**: Assessing the Prospects, Problems, Strengths, And Limitations of Many Areas of Online Education

- **Business Requirements**:

Over the past ten years, there has been a considerable increase in demand for e-learning systems. Businesses in this industry are more motivated than ever to create e-learning platforms as the e-learning market is more lucrative than ever.

- o Functional Requirements
  - Management of Users and Authentication
  - Analytical Reporting
  - Interoperability of integrations
  - Communication
- o Technical Requirements
  - System Interoperability
  - Performance and Scalability
  - Adaptive Design
  - Subject Matter Experts
  - Assets for multimedia

2 LITERATURE SURVEY

2.1 Existing problem

S.No	Paper Name	Author Name and Year of Publication	Research Outcome
1	A survey on big data-enabled	Yuhuan Cui et. Al, 2022	It proposes the use of big data technology in the online education industry, analyzing the impact and development of online education in the

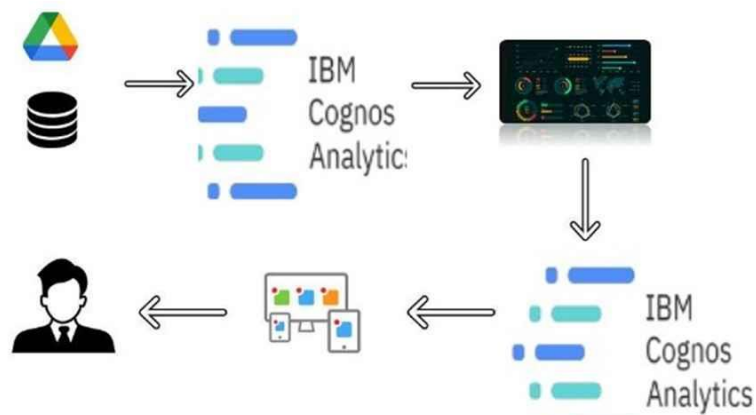|			
	innovative online education systems during the COVID-19 pandemic		context of the new coronavirus epidemic, and at the same time, combining the two to analyze the impact of big data technology on online education in the context of the new coronavirus epidemic, and looking forward to more scenarios of the future use of big data technology with the development of big data technology. Online education will affect the effect of online education due to social factors, such as regional poverty caused by social development and unbalanced network development.
2	Parental Involvement in Children's Online Education During COVID-19; A Phenomenological Study in Saudi Arabia	Maryam Alharthi	This paper contributes to the application of Hoover-Dempsey and Sandler's model of parental involvement in children's schooling, illustrating that an external force drives parental involvement. More specifically, many parents have been forced to change the form of their participation due to the unforeseen shift to e-learning.
3	Enhancement of Online Education in Engineering College Based on Mobile Wireless Communication Networks and IOT	Jaafar Q. Kadhim et. Al, 2023	The proposed system is designed based on IoT and wireless communication networks with the aim of improving the process of virtual education. The data used in this study has been collected through the use of different IoT sensors within the premises of the college, and pre-processed using normalization
4	Impact of online classes on the satisfaction and performance of students during the pandemic period of COVID 19	Ram Gopal et. Al, 2021	The study shows that four independent factors used in the study viz. quality of instructor, course design, prompt feedback, and expectation of students positively impact students' satisfaction and further student's satisfaction positively impact students' performance. For educational management, these four factors are essential to have a high level of satisfaction and performance for online courses. This study is being conducted during the epidemic period of COVID- 19 to check the effect of online teaching on students' performance.
5	Online learning in higher education: Examining the predictors of students' online engagement	Rabia Vezne et. Al, 2023	In this study, the effects of remote learning attitude, extrinsic and intrinsic goal orientation on the dimensions of online engagement were examined. PLS-SEM was used to analyze the data. In all models, relationships related to online collaboration with peers, online communication with instructor, participation in online classes, and completing assignments and tasks were confirmed.

2.2 Proposed solution

Assessing the Prospects, Problems, Strengths, And Limitations of Many Areas of Online Education as well as using SWAT model identifying the analysis of a data. The goal of the online education system is to contribute to the continuing discussion about the future of education and assist in creating a learning environment that is more inclusive, interesting, and productive in the digital era.

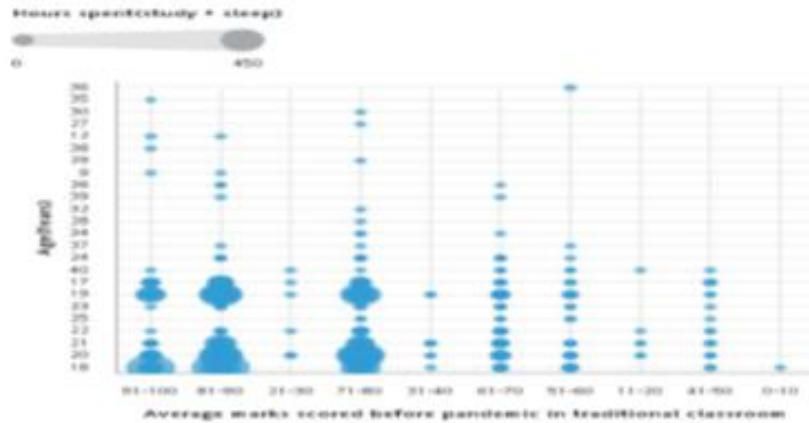**Social Or Business Impact**

3   THEORITICAL ANALYSIS

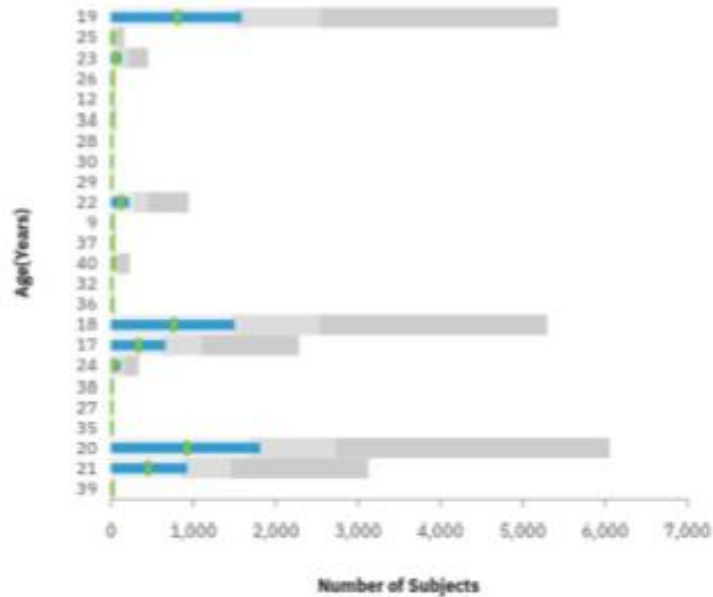3.1 Block diagram

Hardware / Software designing

Hardware

- o Desktop/Laptop

- o Internet Connection

- o Mouse

- o Keyboard

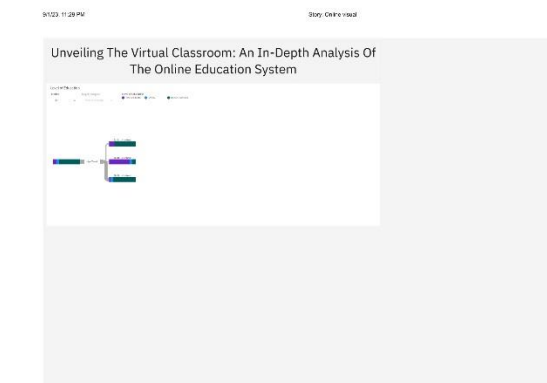Software

- o IBM Cognos Software
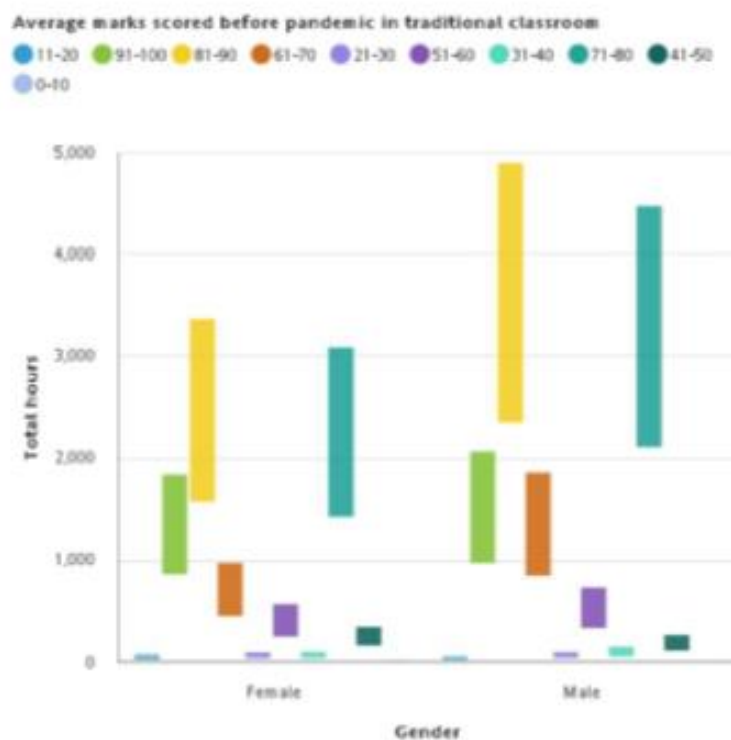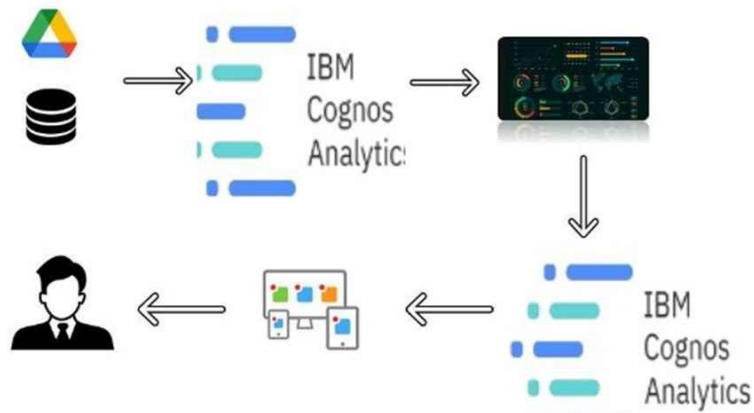
- o Python

- o Excel

4   EXPERIMENTAL INVESTIGATIONS

Average marks scored before pandemic in traditional classroom

5   FLOWCHART
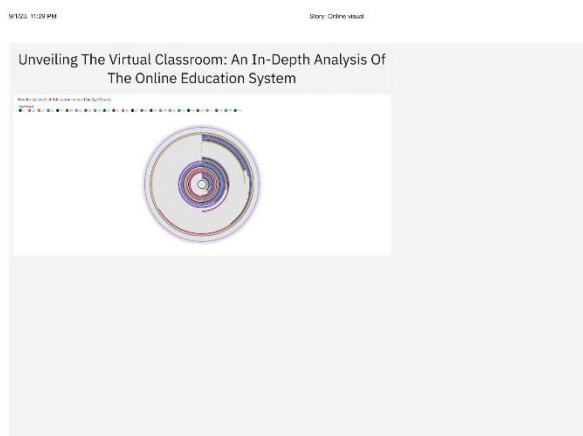
Project Flow :

To accomplish this, we have to complete all the activities listed below,

- Define Problem / Problem Understanding
    - Specify the business problem
    - Business requirements
    - Literature Survey
    - Social or Business Impact.
- Data Collection
    - Collect the dataset
    - Connect data with IBM cognos
- Data Preparation
    - Prepare the Data for Visualization
- Data Visualizations
    - No of Unique Visualizations
- Dashboard
    - Responsive and Design of Dashboard
- Story
    - No of Scenes of Story
- Report
    - Creating a report
- Performance Testing
    - Amount of Data Rendered to DB '
    - Utilization of Data Filters
    - No of Calculation Fields
    - No of Visualizations/ Graphs
- Web Integration
    - Dashboard and Story embed with UI With Flask
- Project Demonstration & Documentation
    - Record explanation Video for project end to end solution
    - Project Documentation-Step by step project development procedure

6   RESULT
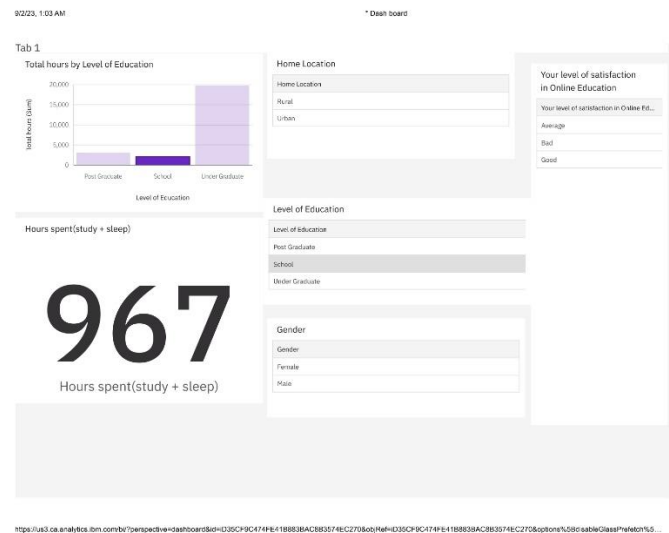
Web Integration:
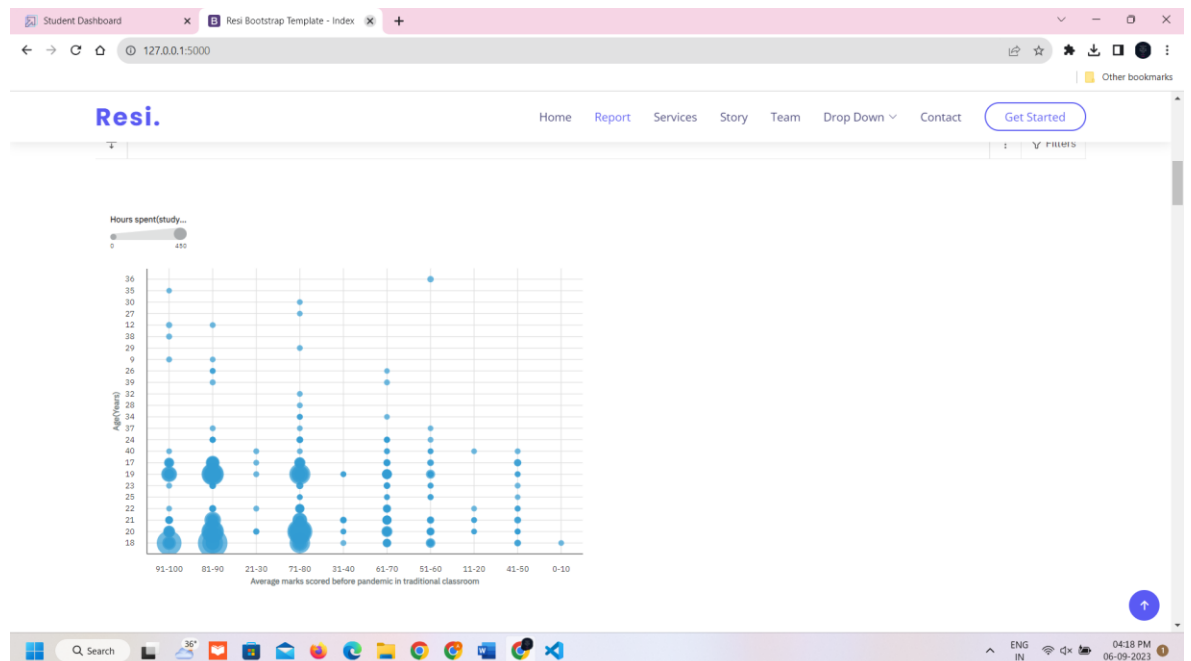
By using the provided ONLINE EDUCATION SYSTEM REVIEW.csv file, I was able to build a data source and do data cleaning by rearranging some of the data. By experimenting with various elements in the columns, I was able to produce visualizations. I developed a dashboard using graphics and a narrative comprised of various sequences. Finally, I produced a report on the system for online education.

After integrating my application with the web, I finally constructed a web application using the bootstrap template and Flask.

7   ADVANTAGES & DISADVANTAGES

List of advantages:

- Lower price. Online courses can frequently prove to be less expensive than traditional ones.

- Flexibility, additional time

- a relaxing environment for learning.

- Developing Online Communication Skills.

- Think of ideas.

- Self-Paced Education.

- An expanded viewpoint.

List of disadvantages:

- Limited Feedback from Teachers to Students

- Monitoring the risk of social isolation cheating is more painful

- People who lack basic digital literacy cannot access online learning.

- Issues with Quality Assurance and Accreditation

- Self-motivation and effective time management are necessary.

- Learning's practical component suffers.

- only applicable to some disciplines

- insufficient training in communication skills

- long-term screen time

- Health Concerns

- restricted use of the resources

- Online courses frequently result in boredom

8   APPLICATIONS

- Tasks of the system administrator

- Voice assistants

- Personalized learning

- Smart content

- Intelligent leadership

9   CONCLUSION

In this project, we began conducting student and teacher surveys,

understanding student needs, and creating an effective feedback system. The content taught to students must be updated based on feedback. These requirements are necessary to make it easier for students to adapt to online teaching/learning. Specific requirements may vary based on student demographics, needs and interests. A comprehensive analysis of the online education system helps educational institutions, decision makers and e-learning platforms to improve the effectiveness and accessibility of online education.

10   FUTURE SCOPE

The online education scenario in India has immense potential and opportunities for the growing youth population. The increased penetration of the Internet and the acceptance of online courses among traditional employers are factors that encourage the spread of cost-effective e-learning. From the good old days to the new, education system reforms have objectively revolved around technology, making classroom learning a thing of the past! Today, professional management programs are expanding their online education options to reach more time- and location-bound students. Accredited educational institutions offer the same interesting documented teaching and learning through online media as compared to classroom teaching. As technology has taken a bigger turn in recognition; "e-learning" learning method is more important in this age. Online learning offers some challenges and many great opportunities. E-learning offers you a flexible schedule, growth in every aspect and exclusive career opportunities at the forefront. Online learning - the learning format is growing rapidly every day!

11   BIBILOGRAPHY

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APPENDIX

A. Source Code

Attach the code for the solution built.