

EXPLORING THE ROLE OF CHATGPT AMONGSTUDENTS

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Abstract—With the rise of conversational AI like ChatGPT, this study aimed to investigate the usage and perceptions of ChatGPT among students for educational purposes. A survey was conducted to collect data from 262 students using a Google form. The data was analyzed using descriptive analysis techniques in MS Excel and Python Jupyter Notebook. The results showed that 88% of the students used ChatGPT as a learning tool, of which 62% were male and 38% female. 33% of the users used ChatGPT weekly, mainly to find specific answers. In addition, 78.6% thought it was beneficial for education, 73.7% thought it could help with time management, and 63.6% thought it could improve academic performance. However, students did not agree that ChatGPT could replace human teachers, which was seen as its main limitation. Overall, 90% of the students favored the use of ChatGPT, while 10% did not. The results suggest that ChatGPT has the potential to enhance the educational experience by providing personalized assistance, improving time management, and supporting academic performance, but should be used as a complementary tool rather than a complete replacement for human teachers.

Keywords—ChatGPT, Survey, Students, Excel, Jupyter Notebook

I. INTRODUCTION

^[1] In the rapidly evolving technology landscape, Artificial Intelligence (AI) has emerged as a powerful tool with the potential to transform various domains, including education. One such AI technology that has received significant attention recently is ChatGPT. ChatGPT is capable of understanding and generating human-like responses, making it a valuable resource for students seeking assistance with academic assignments and queries. With the increasing integration of technology in education, it is critical to understand the impact and implications of AI-driven tools such as ChatGPT on students' learning experiences. This study aims to explore the role of ChatGPT among students by examining its usage patterns, perceived benefits, limitations, and overall impact on the educational process. The proliferation of AI technologies in education raises questions about their potential to enhance or disrupt traditional teaching and learning methods. ChatGPT, with its ability to provide personalized explanations, suggest learning strategies, and offer on-demand support, has the potential to revolutionize the way students approach academic tasks and acquire knowledge. This study delves into the perspective of the students themselves, gathering insights through a comprehensive survey. By analyzing the collected data using descriptive analysis techniques in MS Excel and Python.

Jupyter Notebook, the research aims to uncover the extent to which students have adopted ChatGPT as a learning tool, their frequency of use, and the perceived advantages and disadvantages of this technology. In addition, the study examines the potential of ChatGPT to enhance time management skills, improve academic performance, and contribute to the overall improvement of the educational system. By exploring these aspects, the research aims to shed light on the possibilities and limitations of integrating AI into education, paving the way for informed discussion and decision-making regarding the responsible and effective use of such technologies. ^[1]

II. OVERVIEW OF THE PROBLEM

A. Problem Study

Analysing the ChatGPT usage by surveying among Students. Through the survey we know about ChatGPT can be a valuable tool for students in education due to its ability to provide personalized and instant assistance with a wide range of academic-related inquiries..

B. Challenges / Need of the study

The Challenges we faced in ChatGPT has only data's till year 2021. It doesn't have the data after year 2021. Incomplete Understanding Without exposure to recent advancements in various fields, ChatGPT may have an incomplete understanding of technological, scientific, or societal changes that have occurred after 2021. Consequently, its responses may not reflect the latest knowledge or perspectives Prepare Your Paper Before Styling.

C. Software, Tools and Libraries Requirements

The software used in this summer internship project is MS Excel and Python.

- **MS Excel:** ^[2] Microsoft Excel 2016 is a powerful tool for data analysis. With features like sorting, filtering, PivotTables, formulas, charts, and statistical analysis, it allows you to analyze and visualize data effectively. You can also use conditional formatting, data validation, and external data sources. Overall, it provides a comprehensive suite of tools to analyze data and derive valuable insights. ^[2]

- **Python:** ^[2] Python has become a staple in data science, allowing data analysts and other professionals to use the language to conduct complex statistical calculations, create data visualizations, build machine learning algorithms, manipulate and analyze data, and complete other data-related tasks. Python is commonly used for 8 developing websites and software, task automation, data analysis, and data visualization. Since it's relatively easy to learn, Python has been adopted by many non-programmers such as accountants and scientists, for a variety of everyday tasks, like organizing finances.^[2]

III. DATA PREPARATION

After the text edit has been completed, the paper is ready for the template. Duplicate the template file by using the Save As command, and use the naming convention prescribed by your conference for the name of your paper. In this newly created file, highlight all of the contents and import your prepared text file. You are now ready to style your paper; use the scroll down window on the left of the MS Word Formatting toolbar.

A. Data Collection Approaches

The Data set is collected through Google forms.

https://docs.google.com/forms/d/e/1FAIpQLSdHVrdhC5Pqv0aTv00OkjXb5Hjmtb9iyW0BF1fH_A3c6yW1row/closedform.

Field Definition:

a) Gender

Gender describes that the responder is Male or Female.

b) Have you ever used ChatGPT as a learning tool?

This question aims to gather information about whether the students have utilized ChatGPT as a tool for learning purposes.

c) How often do you use ChatGPT as a learning tool?

The question represents the frequency or regularity with which respondents utilize ChatGPT for educational purposes.

d) In what ways do you think generative AI, like ChatGPT, may enhance education?

The question seeks to gather insights from respondents regarding the potential benefits and contributions of generative AI.

e) Do you think ChatGPT is a beneficial tool for education?

The question represents an inquiry into participants' opinions regarding the usefulness of ChatGPT as a tool in an educational context.

f) Have you found ChatGPT helpful in improving your academic performance?

The question represents a measure of the perceived impact of ChatGPT on students' academic performance.

g) What do you think are the benefits of ChatGPT for students?

The question intends to capture the potential positive outcomes or advantages that students believe ChatGPT offers to them as users.

h) Do you think ChatGPT can be used for time management?

The survey question represents an inquiry into the participants' opinions and beliefs regarding the potential use of ChatGPT, an AI-powered language model, for managing time effectively.

i) Do you think ChatGPT can replace human teachers?

The survey question represents an inquiry into the participants' opinions on the potential of ChatGPT, an AI-based language model, to take over the role traditionally performed by human teachers.

j) Do you think ChatGPT can provide accurate assessments of understanding?

The survey question is aimed at gathering students' opinions on the capability of ChatGPT to accurately evaluate or assess their level of understanding in an educational context.

B. Data Method

^[3]EDA is an iterative process that helps you gain a better understanding of your data. Start with simple methods and iterate as you learn more. There are no right or wrong ways to do EDA, so be creative and experiment. EDA, or Exploratory Data Analysis, involves techniques like summary statistics, data visualization, data cleaning, univariate analysis, bivariate analysis, multivariate analysis, statistical tests, time series analysis, and geospatial analysis. These techniques help understand, analyze, and gain insights from data before formal modeling or hypothesis testing. EDA is crucial for understanding data patterns, relationships, and generating hypotheses for further investigation. EDA is a valuable tool for data analysts to make better decisions based on a deeper understanding of the data. ^[3]

C. Purpose of Data

In today's Education field, ChatGPT, an AI-powered language model, is playing an increasingly important role. It offers personalized learning experiences by understanding and responding to student's queries and providing explanations and resources. Acting as a virtual tutor, ChatGPT assists students in understanding complex concepts and provides on-demand support, empowering them to learn at their own pace. This technology enhances student's comprehension and confidence, making education more accessible and engaging.

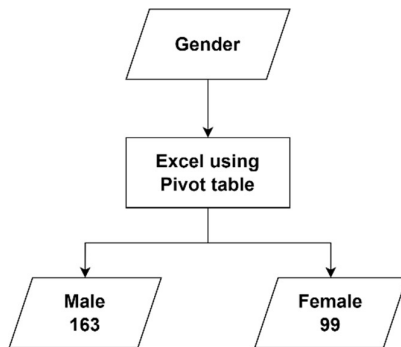
IV. METHODOLOGY

A. Descriptive Analysis / Model Used

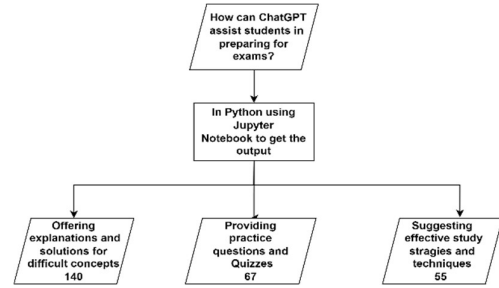
^[4] Descriptive analysis in MS Excel involves summarizing and examining data to gain insights and understand its characteristics. It helps in understanding the central tendencies, distributions, and variability of the data. ^[4]

Flowchart Excel:

- a. Analyzing How many Students are Boys' and Girl's

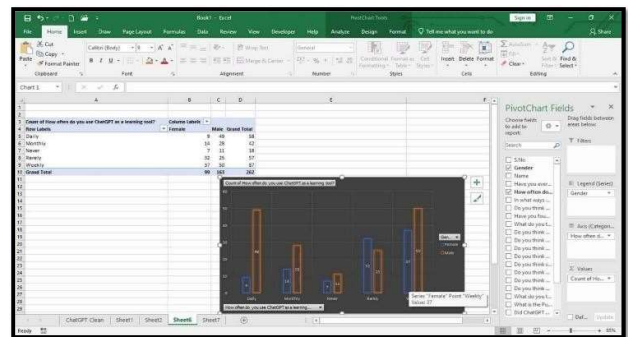
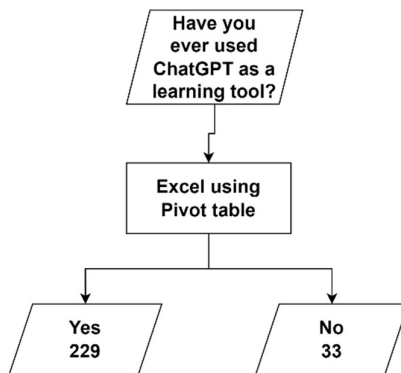


How can ChatGPT assist students in preparing for exams?



V. RESULTS, FINDING INSIGHTS & DISCUSSION RESULT-EXCEL:

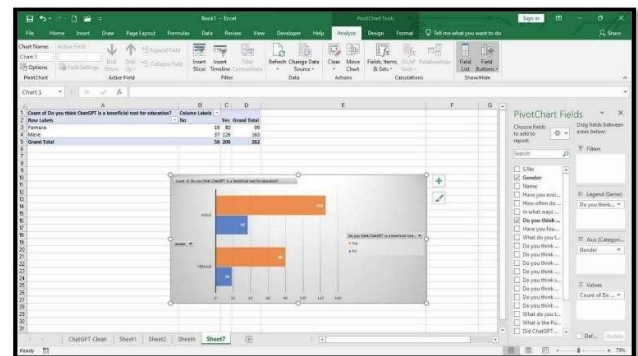
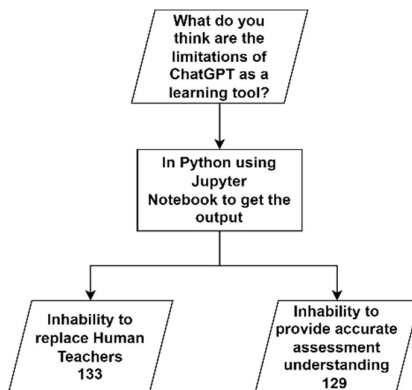
- b. Have you ever used ChatGPT as a learning tool?



In the above image, the chart shows that student use ChatGPT weekly.

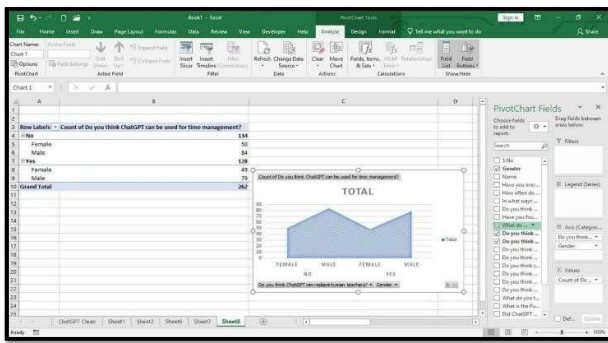
- c. What do you think are the limitations of ChatGPT as a learning tool?

d.

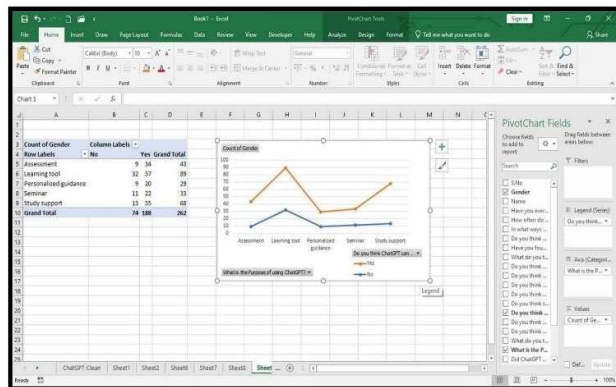


In the above image, the chart represents that the maximum number of students thinks ChatGPT is beneficial for student

- c. Do you think ChatGPT can be used for time management?



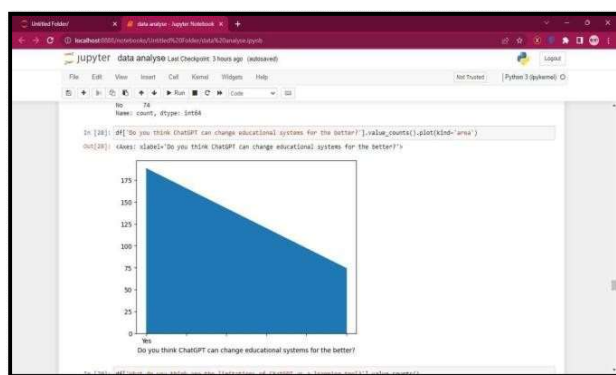
d. What is the Purpose of using ChatGPT?



In the above image, the line chart represents that students use ChatGPT as a learning tool.

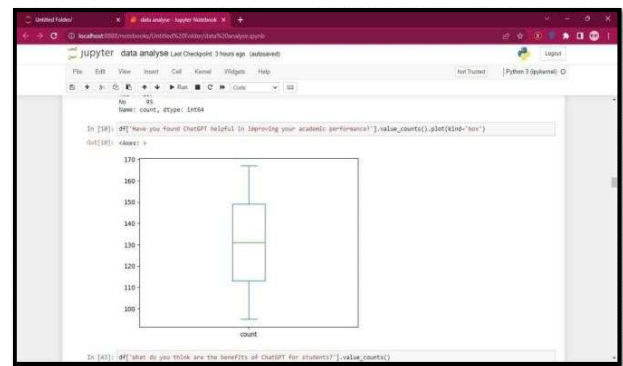
RESULT-JUPYTER NOTEBOOK:

a. Do you think ChatGPT can change educational system for the better?



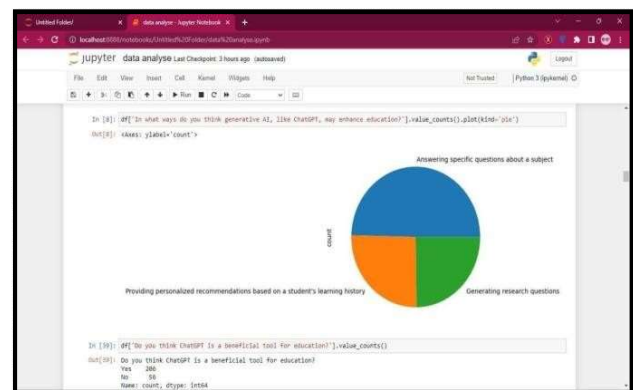
In the above image, the area represents that ChatGPT can change educational system for students.

b. Have you found ChatGPT helpful in improving your Academic Performances



In the above image, the box represents that students agreed 50-50 to ChatGPT helpful in improving in academic performance.

c. In what ways do you think generative AI, like ChatGPT, may enhance Education?



In the above image, the pie-chart represents that ChatGPT enhance education by answering specific questions about a subject.

VI. SUMMARY & CONCLUSION

Summary:

The survey topic "Exploring the Role of ChatGPT on Students" aims to investigate the impact and potential benefits of using ChatGPT, a conversational AI model, in the field of education. The survey collects data related to ChatGPT usage among students and analyzes their perceptions regarding its benefits, limitations, and impact on the educational system. The survey utilizes data analytics approaches, including data collection through a Google form and descriptive analysis using MS Excel and Jupyter Notebook. The survey reveals that 88% of students use ChatGPT, with 62% 18 being boys and 38% being girls. However, 12% of students do not use it. Among the users, 33% utilize ChatGPT on a weekly basis, primarily for finding specific answers. Furthermore, 78.6% of students believe it is beneficial for education, 73.7% think it can aid in time management, and 63.6% believe it can enhance academic performance. Overall, 90% of students are in favor of ChatGPT, while 10% are not. However, students do not agree that ChatGPT can replace human teachers, which is seen as its main drawback.

Conclusion:

In conclusion, the survey on the role of ChatGPT in education provides valuable insights into the potential benefits and limitations of implementing conversational AI in the educational domain. By analyzing the data collected from students, the survey sheds light on the frequency of ChatGPT usage and explores student's perceptions regarding its advantages and disadvantages

VII. REFERENCE:

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