

Cedup Perfeito Manoel de Aguiar

Applied English in Data Science

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Subjects and apps most preferred by Data Science students

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Official Project Document

Introduction

This project aims to explore the theme "Most preferred subjects and applications for Data Science students" through data collection, analysis, and visualization methods. By using artificial intelligence as a tool, we seek to transform raw data into useful and accessible information, promoting understanding and engagement on the subject. With the chosen theme, it is possible to obtain relevant data for the current times, due to the current study environment being a technical school that offers Data Science courses, in which the subject is not so explored by the academic and student community. The goal is to study students' preferences, thus allowing for better intellectual development not only in a specific subject but also as a whole in Data Science.

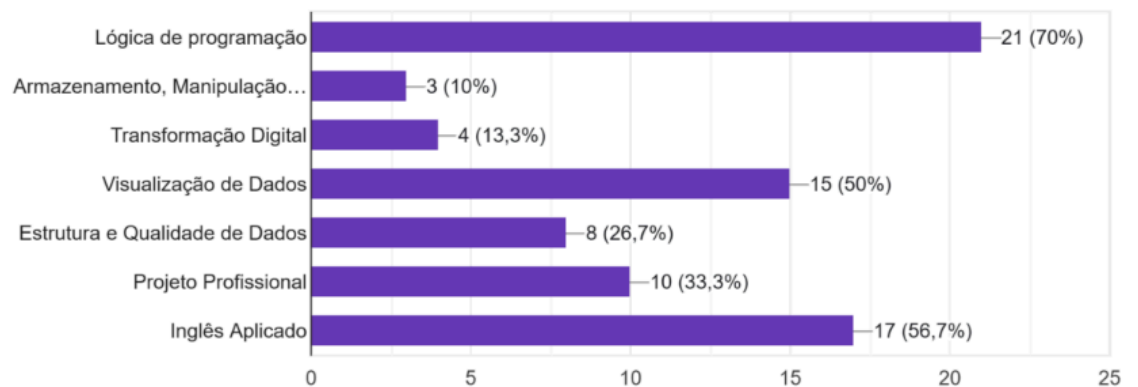
Development

The theme "Most preferred subjects and applications for Data Science students" is highly relevant in the school environment due to the lack of knowledge among professionals regarding the newly developed area and the understanding of its subjects taught to young academics. This main theme encompasses some chosen subtopics, namely: Preferred subjects, most used artificial intelligences, most preferred software in the Data Science course, and how many students who take Data Science actually like programming.

- **Subtopic 1: Preferred Subjects** Data Collected and Analyzed: The form was answered by 31 students at the time this document was produced, and students showed a greater preference for three specific subjects, remembering that the form had multiple-choice questions so students could choose more than one subject of their preference. Programming Logic was chosen by 70% of students (21 students), Applied English by 56.7% (17 students), and Data Visualization by 50% (15 students).

Quais suas matérias preferidas em Data Science? Marque quantas quiser.

30 respostas

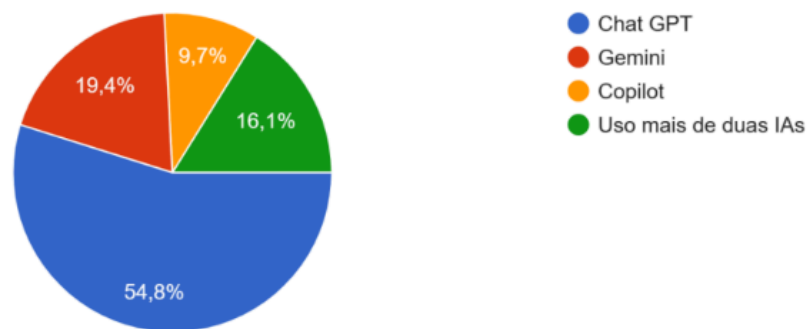


Graph 1: Preferred subjects for Data Science students

- **Subtopic 2: Most used artificial intelligences.**
- **Data Collected and Analyzed:** Artificial intelligence has been very present in the school scenario in recent years. It has been observed that Data Science students use them a lot in their daily lives. To this end, a research was conducted with the question "Which AI do you use the most in Data Science?". The graph shows a strong preference for the artificial intelligence "ChatGPT", which is probably due to the fact that it was one of the first to be developed and made available to the public. Of the students, 17 responded that they use "ChatGPT", 6 responded that they use "Gemini", 3 responded that they use "Copilot", and 5 responded that they use more than two AIs.

Qual a IA que você mais usa em Data Science?

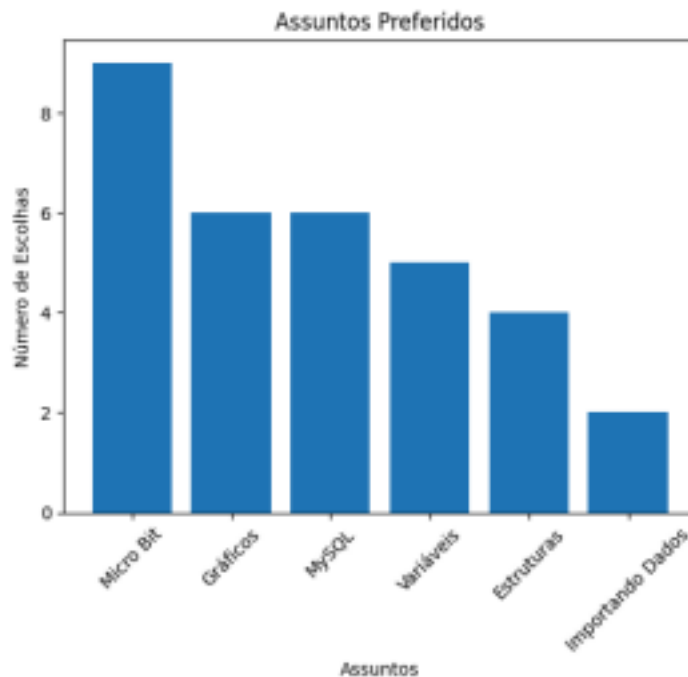
31 respostas



Graph 2: Most Used AI by Data Science Students

• Subtopic 3: What topics do students who enjoy programming prefer? •

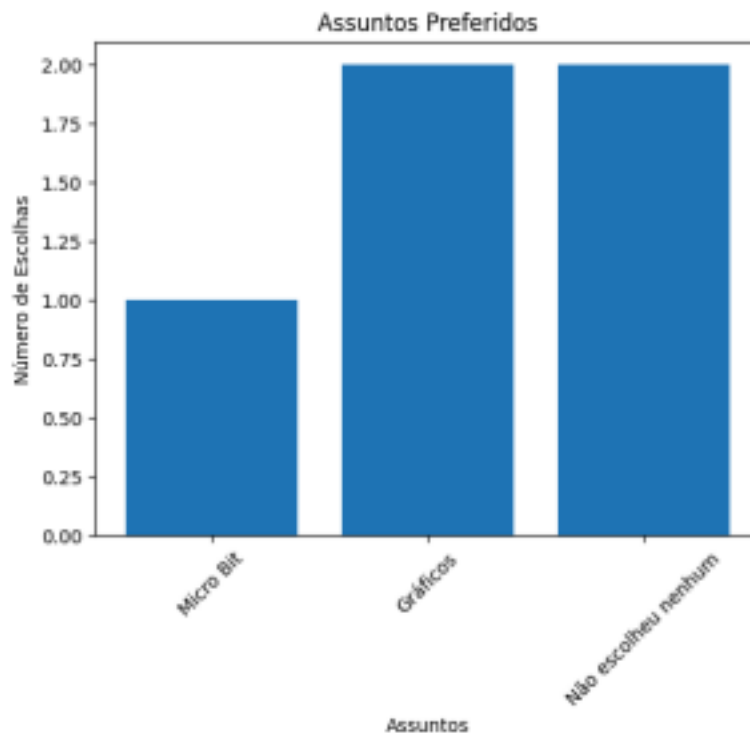
Data Collected and Analyzed: We analyzed which topics students who enjoy programming responded to in the research form. 12 students responded that they enjoy programming, thus data was collected from the form itself, where a spreadsheet was created in Excel. After that, with the help of "Gemini," a Python code was created to generate a graph showing how many times each topic was chosen.



Graph 3: Frequency of topic selection by programming enthusiasts

● **Subtopic 4: Preferred topics among students who dislike programming** ○

Data Collected and Analyzed: We analyzed which topics students who dislike programming selected in the survey. Five students indicated a dislike for programming. The data was collected from the survey and inputted into an Excel spreadsheet. Using "Gemini," a Python code was generated to create a graph visualizing the frequency of each topic choice.



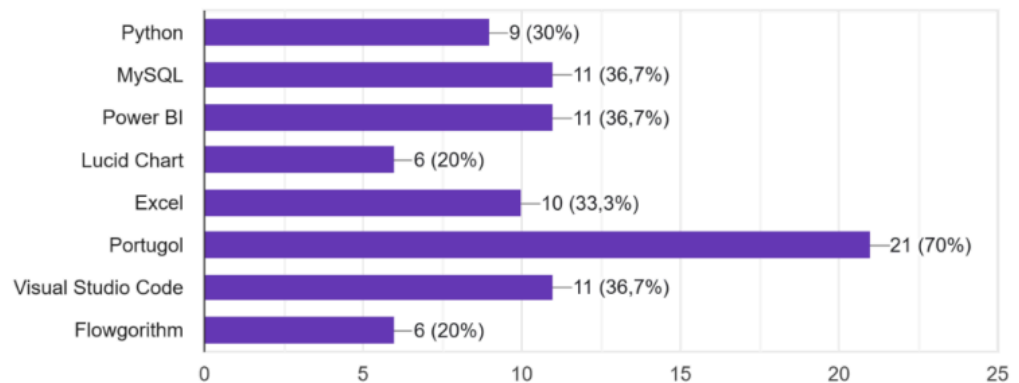
Graph 4 - Topic choices of those who dislike programming

- **Subtopic 5: Preferred Software of Data Science Students.**

- **Data Collected and Analyzed:** This graph analyzed which software introduced in the Data Science course was the most preferred. Only software introduced to students in the Data Science course was presented. The graph shows a greater preference for Portugol Studio, as it is a Portuguese software and is simpler and more practical to use and learn. 70% of students chose it, totaling 21 students. In second place, we have MySQL, Power BI, and Visual Studio Code, which were chosen by 36.7% of students, totaling 11 students. "Although these software are a bit more complex, throughout the course, the teachers ended up explaining them in a more relaxed way, making learning more dynamic and easy," said student João Lucas.

Quais seus softwares preferidos? Marque quantas quiser.

30 respostas



Graph 5 - Data Science students' preferred software

Conclusion

This project has demonstrated the significance of better understanding students' preferences to foster their optimal learning development based on the data collected through this research. Given the increasing complexity of teaching methodologies in today's educational environment, the importance of gaining deeper insights into students' needs is paramount. It is anticipated that this project will enable the school to better comprehend the presented data and consequently improve its teaching methods.

Learnings and Challenges

The work was simple and straightforward, where the data was presented in a dynamic and easy-to-understand way. The pair did not face any difficulties in carrying it out due to the fact that both students are from the Data Science course and already have knowledge of the subject and use the software and AI presented in the document.