

I.T.S. DATA ANALYSIS 2024

MOHD. ATIF

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Program: B.SC.(Data Science)

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Enrollment- 22STUCDDDo4008

Abstract

This report presents an analysis of data collected from college students to understand their preferences and behaviors. The study focuses on various aspects such as preferred study times, library usage, transportation modes, and more. The analysis reveals significant patterns and insights that can help improve student services and facilities.



THE PROCESS

Design and Deploy the Survey ¹

Create a comprehensive questionnaire using Google Forms to collect data on various aspects such as academic performance, study habits, extracurricular activities, and overall student satisfaction. Ensure the survey is distributed effectively to a diverse sample of students to obtain representative data.

Data Collection and Cleaning ²

Collect responses systematically and organize the data for analysis.
Clean the data by handling missing values, correcting inconsistencies, and ensuring the data is in a suitable format for analysis.

Data Analysis ³

Perform exploratory data analysis (EDA) to understand the underlying patterns and trends within the collected data.
Use statistical methods to identify significant correlations and insights.

Data Visualization ⁴

Create visual representations of the data using tools like Matplotlib, Seaborn, or Tableau to make the findings easily interpretable.

Reporting and Presentation ⁵

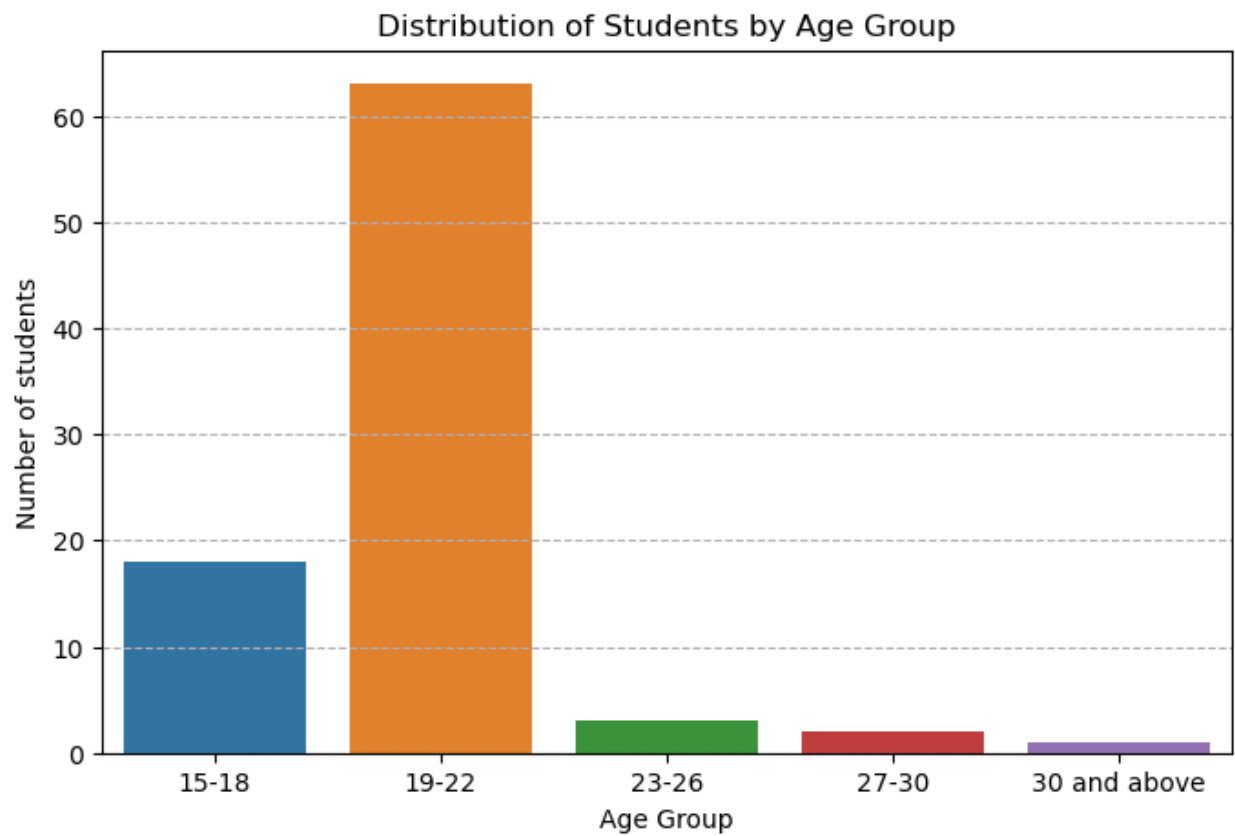
Compile the results of the analysis into a comprehensive report that outlines the key findings, conclusions, and recommendations based on the survey data.

Descriptive Statistics:

The dataset contains total 120 entries with 18 columns
Out of this 87 entries is of ITS Students, including information about student’s demographics, academic details, transportation modes, reasons for choosing the college, study preferences, extracurricular activities, and post-graduation plans.

	Age Group	Number of students
0	15-18	18
1	19-22	63
2	23-26	3
3	27-30	2
4	30 and above	1

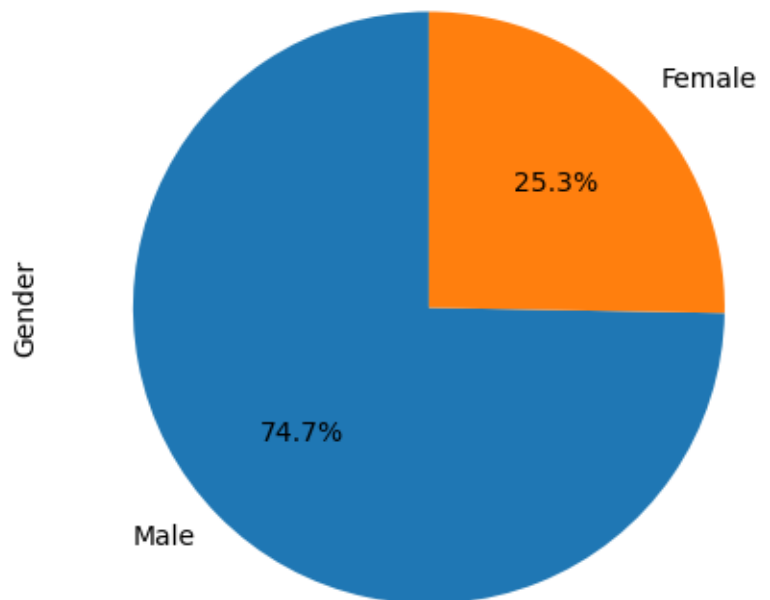
Distribution of Age Group in the University



Distribution of Gender in the University

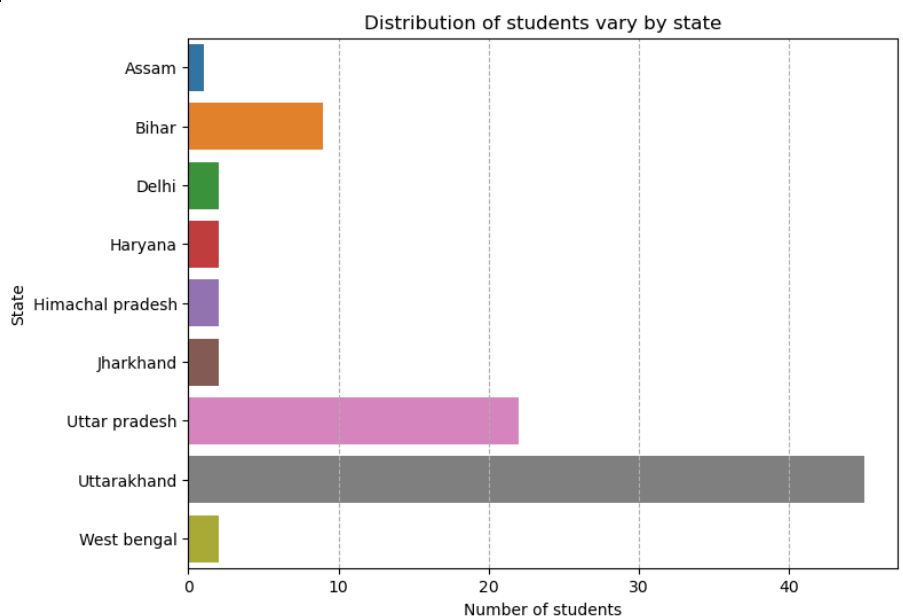
The dataset shows a significant gender imbalance, with a higher proportion of males (74.7%) compared to females (25.3%).

Distribution of Students by Gender



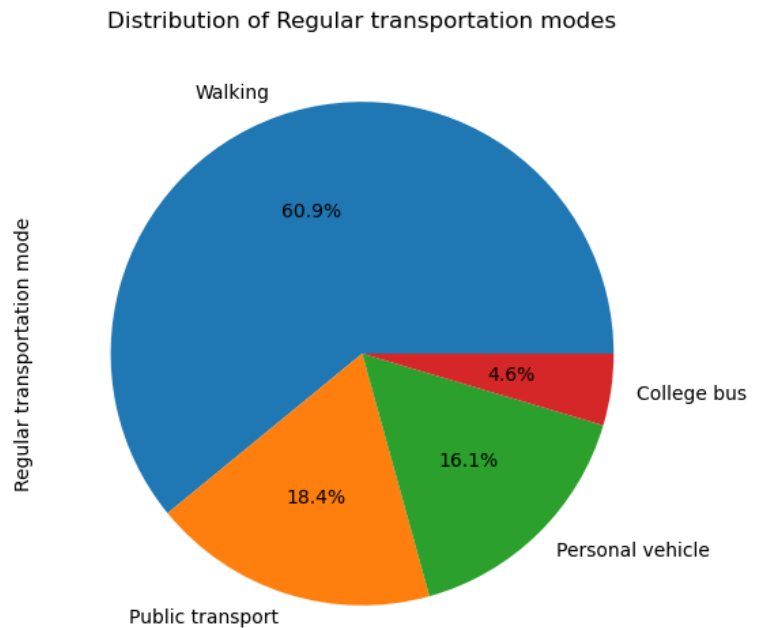
Distribution of students vary by states

Most students come from Uttarakhand and Uttar Pradesh, indicating a strong regional presence. Bihar has moderate representation, while other states like Delhi, Himachal Pradesh, Jharkhand, Haryana, West Bengal, and Assam have minimal representation. This suggests the college primarily attracts students from Northern Indian states.



Distribution of Regular transportation modes

This indicates that the majority of students prefer walking, followed by using public transport and personal vehicles. The college bus is the least used mode of transportation

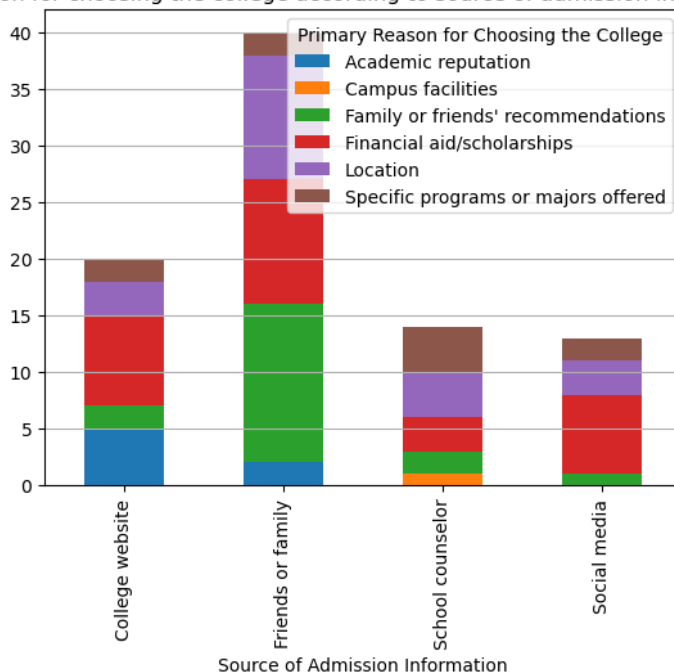


Trend Analysis:

The most common reasons for choosing the college

- **College website:** Students who looked at the college website considered financial aid/scholarships and academic reputation the most important factors.
- **Friends or family:** Students who got information from friends or family, most of them are convinced with them and considered location the most important factor, followed by financial aid/scholarships.
- **School counsellor:** Students who consulted with a school counsellor placed the most weight on Specific programs or majors offered followed by location.
- **Social media:** Social media was the least common information source and those who learned about colleges this way considered financial aid/scholarships to be the most important factors.

Reason for choosing the college according to source of admission information

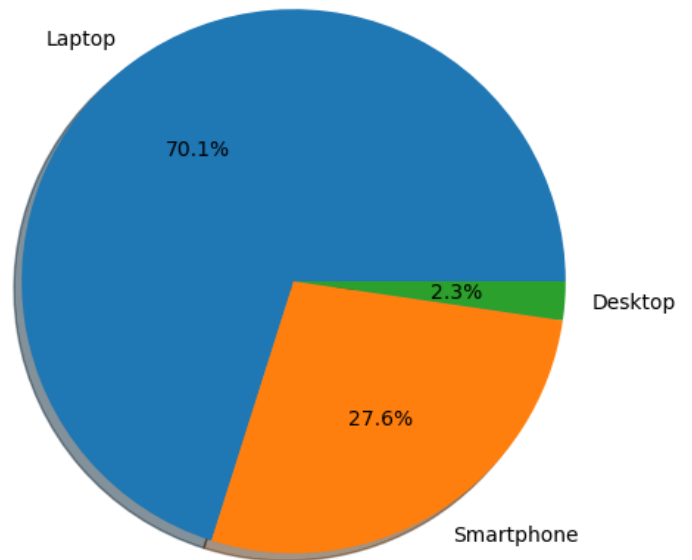


Commonly used device for studying

Laptops are the most preferred device used by students for studying, at 70.1%. This is followed by smartphones at 27.6%, and desktops at 2.3%.

There are a few reasons why laptops might be preferred over desktops for studying. Laptops are portable, which means students can easily move them around campus or between different rooms at home. Laptops can also be used for a wider variety of purposes than desktops, such as taking notes in class, working on group projects, or giving presentations.

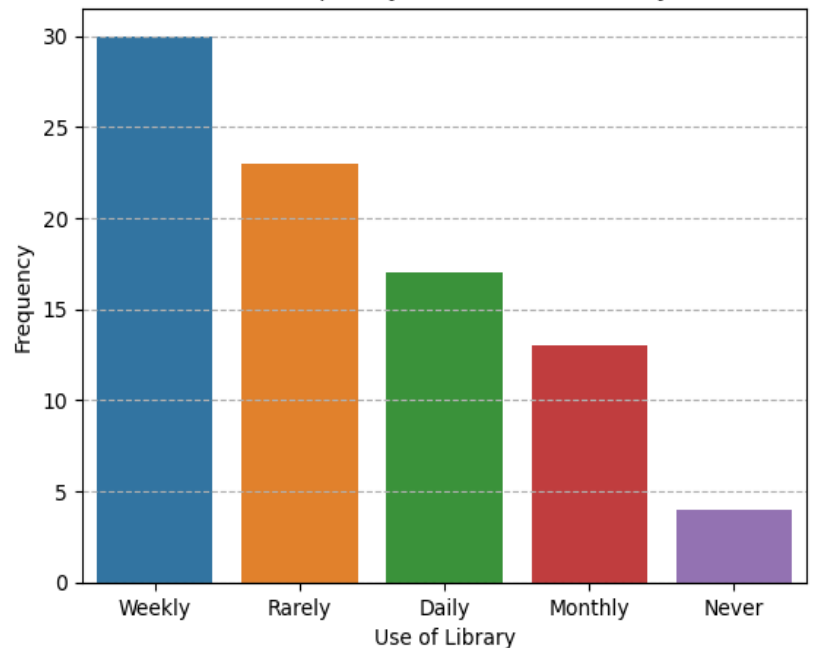
Preferred Devices used by students for studying



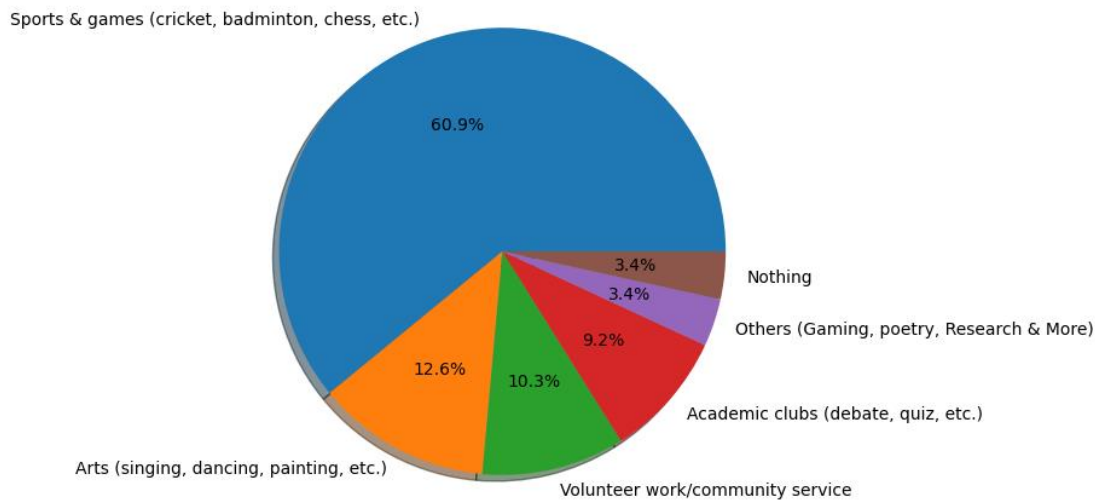
How often students used library

- **Overall library use:** Weekly library use is the most frequent category, with 35% of students reporting using the library this often. Daily and monthly use follows at 19% and 14% respectively. This suggests that a significant portion of the student body finds the library to be a valuable resource.
- **Less frequent use:** The combined percentage of students who rarely or never use the library is 32% (27% rarely + 5% never). This suggests that the library is not used by all students.

How frequently Students used library



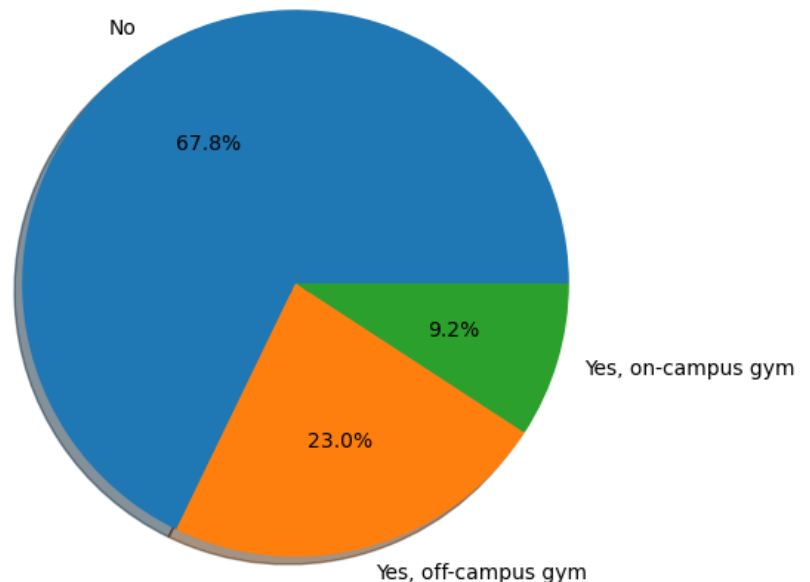
Distribution of student's participation in Extracurricular activities



The pie chart shows that sports and games are the clear favorite among extracurricular activities. However, a significant portion of students (35.5%) participate in categories other than sports and games.

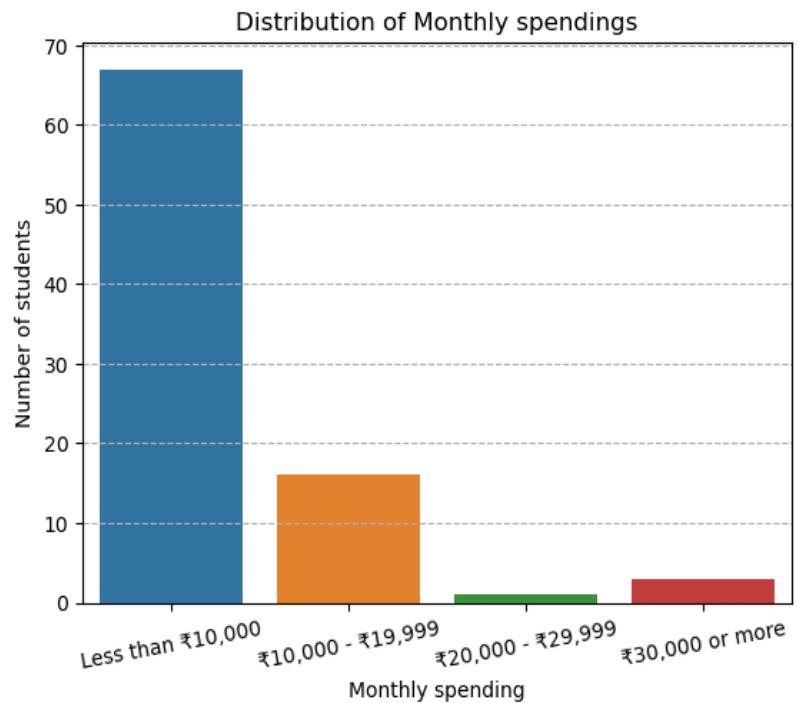
Distribution of students in Gym Membership

It indicates that most respondents do not participate in gym memberships, while a smaller percentage prefers off-campus gyms over on-campus ones. This could suggest various factors influencing the choice, such as convenience, availability, or personal preference for facilities available off-campus.

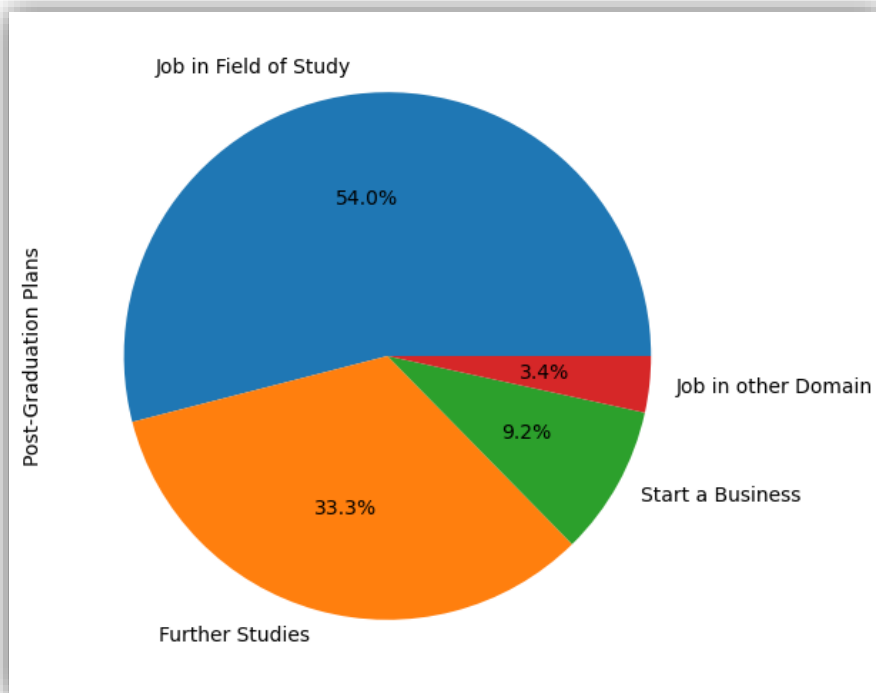


Monthly spending Behavior

The chart reveals that the majority of students have relatively low monthly spending, with most students spending less than ₹10,000. As the spending amount increases, the number of students decreases significantly, indicating that higher monthly spending is less common among the students.



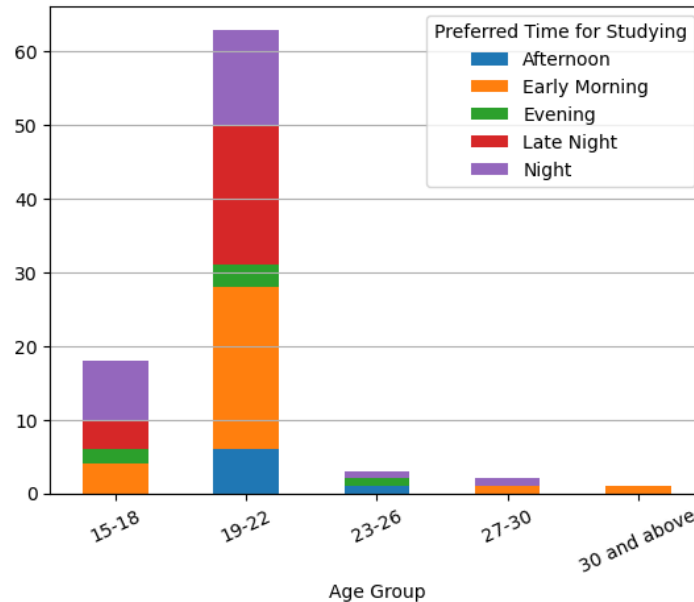
Post-graduation plans Distribution



It indicates that more than half of the students plan to secure a job in their field of study, while a third aim to continue with further studies. A smaller number are looking to start a business, and very few intend to pursue jobs in other domains.

Correlation Analysis:

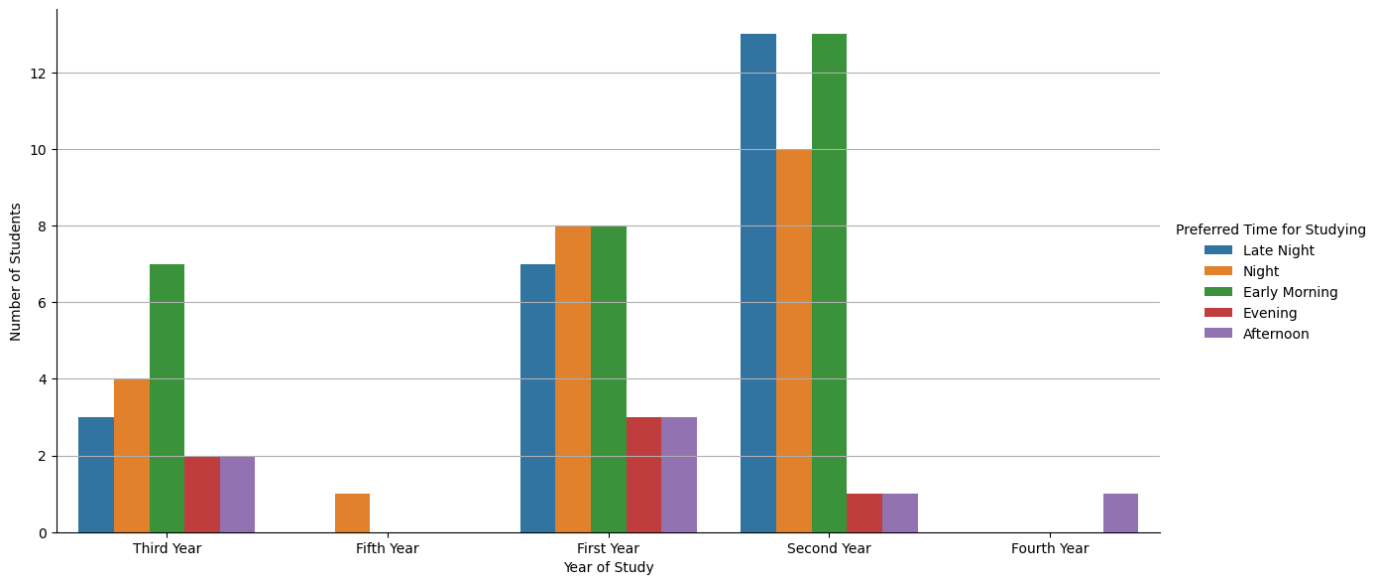
Preferred time for studying according to age groups



- Age Group 15-18:**
 - Preferred study times are spread across multiple categories, with the highest preference for night studying.
- Age Group 19-22:**
 - A significant preference for early morning and night study sessions.
 - Late night and evening study times also have notable preferences.
- Age Group 23-26:**
 - Night study sessions are the most preferred.
 - Some preference for late night and afternoon study sessions.
- Age Group 27-30:**
 - Minimal preference for late night study sessions.
- Age Group 30 and above:**
 - Shows a slight preference for early morning study sessions.

Overall, younger age groups (15-18 and 19-22) have a more diverse range of preferred study times, while older age groups (27-30 and above) show more specific preferences. The night study session is the most preferred time across all age groups.

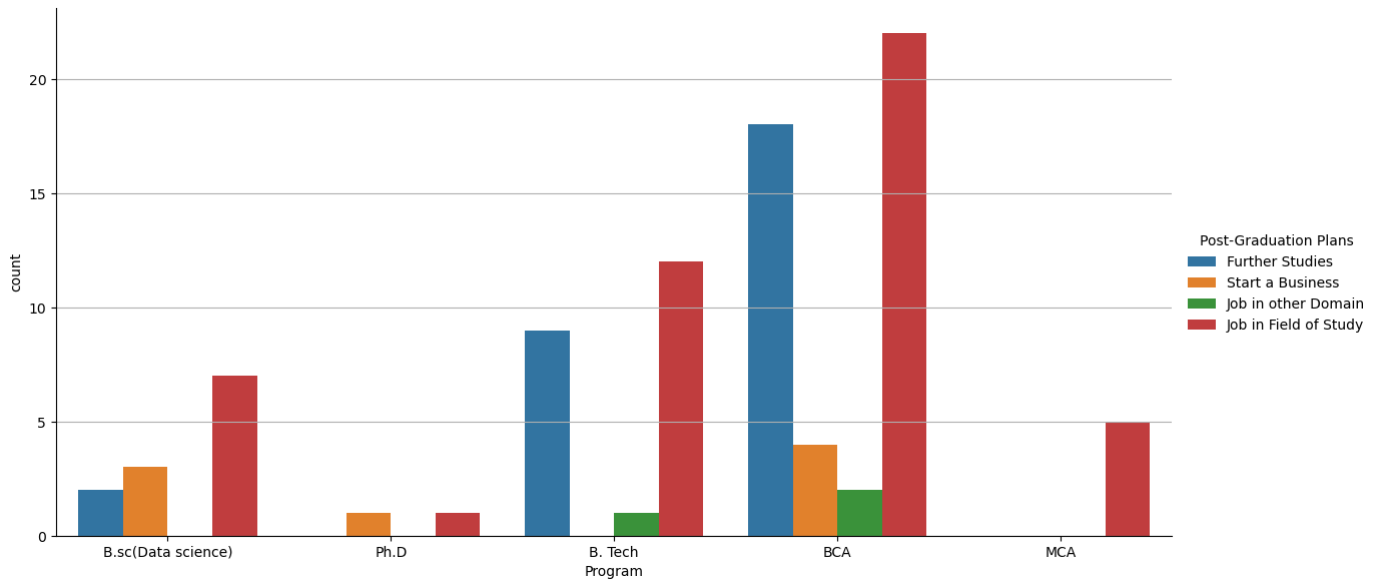
Preferred Study Times Across Different Years of Study



- First Year:**
 - Night and early morning are the most preferred study times.
 - Some students also prefer late night, evening, and afternoon study sessions.
- Second Year:**
 - Late night and early morning are highly preferred.
 - Night is also a popular choice, with minimal preference for evening and afternoon.
- Third Year:**
 - Early morning is the most preferred study time.
 - Night and late night are also popular.
 - Some students prefer evening and afternoon study sessions.
- Fourth Year:**
 - Only a few students show a preference, with afternoon being the most noted.
- Fifth Year:**
 - Very few preferences indicated, with a slight preference for night study sessions.

Overall, early morning and night study sessions are popular across most years of study, with late night also being a significant preference in the second year. Preferences diversify somewhat in the third year, while fourth and fifth years show fewer distinct preferences, potentially due to a smaller sample size.

Post-Graduation plans according to different Programs



1. **B.Sc (Data Science):**

- Most students plan to get a job in their field of study.
- A smaller number of students are considering starting a business, with the least opting for further studies.

2. **Ph.D.:**

- Few students have indicated their plans, with a slight preference for starting a business and getting a job in their field of study.

3. **B. Tech:**

- Students are split between pursuing further studies and getting a job in their field of study.
- A small number of students plan to work in a different domain.

4. **BCA:**

- Most students plan to get a job in their field of study.
- Some students plan to continue with further studies, while fewer students consider starting a business or working in another domain.

5. **MCA:**

- Students predominantly plan to get a job in their field of study.

Overall, the majority of students across different programs plan to get a job in their field of study. There is also a notable interest in further studies, especially among BCA and B. Tech students. Starting a business is a less common choice, but it is still considered by some students across various programs.

CONCLUSION

The final conclusion of the ICFAI Tech School Data Analysis 2024 emphasizes the prevalent preference for walking, public transport, and personal vehicles over the college bus for transportation. Post-graduation plans predominantly involve securing a job in the field of study. Library usage patterns show that weekly visits are the most common, indicating the library's value as a resource for a significant portion of the student body. Additionally, the analysis reveals a notable gender imbalance with 74.7% male students and 25.3% female students, while students primarily come from Northern Indian states like Uttarakhand and Uttar Pradesh. Reasons for choosing the college vary, with factors like financial aid/scholarships, family-friend's recommendation, and location playing significant roles in decision-making.