Customer Engagement Analysis – 365 Platform

Introduction

In the rapidly evolving field of online education, understanding and enhancing customer engagement is crucial for maintaining competitive advantage and fostering customer loyalty. This project aims to analyze various aspects of customer engagement to identify patterns, trends, and areas for improvement that can lead to more effective interactions and increased satisfaction for our stakeholder – 365 Platform.

365 Platform is an online platform that provides online training and education for data science professionals, including coursed for statistics, programming, data visualization, machine learning, deep learning, and other data science topics.

Objective:

- Which courses are the most watched by students, and how are they rated?
- How many students register each month, and what fraction are also onboarded?
- How do students engage with the platform (minutes and average minutes watched) based on student type (free-plan or playing)?
- Do students watch more content with time, and does it vary seasonally?

- Which countries have the most students registered, and does this number scale proportionally with the number of minutes watched per country?

Data Analysis

1. *Which courses are the most watched by students, and how are they rated?*

Course Title	Total Minutes Watched	Average Minutes	Number Of Ratings	Average Rating
Introduction to Data and Data Science	333,265.9	39.09	572	4.86
SQL	234,824.8	144.6	125	4.82
Python Programmer Bootcamp	155,164.3	136.23	101	4.82
Statistics	193,279.6	96.5	215	4.81
Introduction to Excel	164,472.1	67.96	242	4.78

Based on the above table of top 5 most popular courses, "Introduction to Data and Data Science" is the most watched course on the platform based on the total minutes watched site-wise, with a total of 333,265.9 minutes. This number is well higher than the other courses on the list, let's look at some information of this course, and dissect the reason behind it.

Like the name suggests, this course serves as a fundamental building block for subsequent courses on the platform and is a natural starting point for any novice starting their data science journey. It is important to note that this course is relatively brief, featuring just three hours of content. The significant number of ratings it has garnered further underscores its critical role.

But when considering the Average Minutes Watched metric, the course "SQL" stands out as the most engaging, with students watching an average of 144.6 minutes. This popularity is likely due to SQL's essential role in the career of data scientists and data analysts. It's also worth noting that the high average viewing time may be attributed to the fact that the "SQL" and "Python Programmer Bootcamp" courses are among the longest on the 365 Platform, lasting 12 and 20 hours respectively.

"Statistics" , "Introduction to Excel" , and "Python Programmer Bootcamp" come in third, fourth, and fifth on the list respectively. All these top 5 courses scored high rating around 4.8 which is impressive, given the high number of ratings.

2. *How many students register each month, and what fraction are also onboarded?*

Registered Students
35,230

% Onboarded Students
51.54%
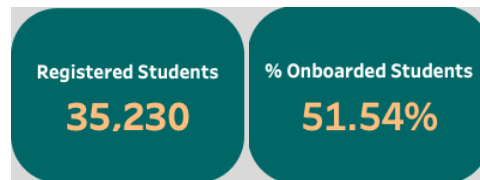
The KPI for Registered Students highlights that 35,230 students have registered on the platform during entire analysis period, but only 51.54% students have progressed to watch a lecture, indicating a robust initial engagement.
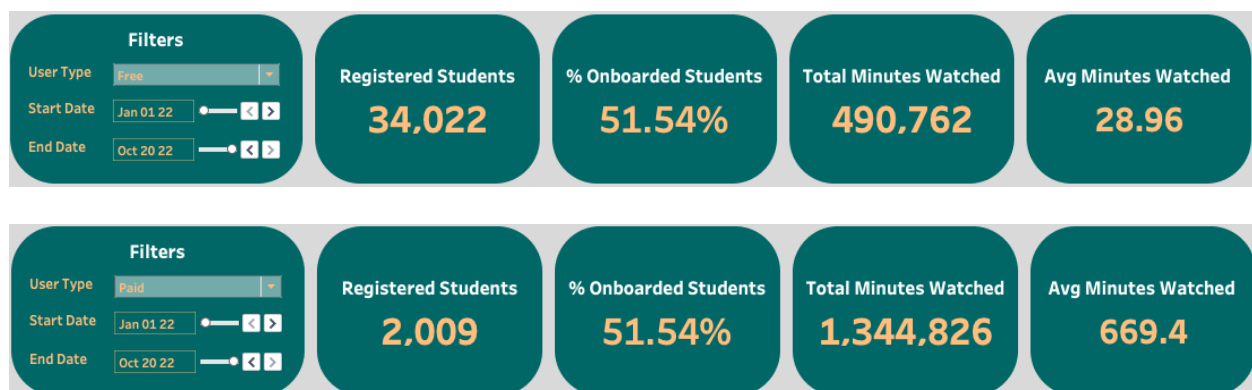
However, this success prompts a critical reflection: Why haven't the remaining half of registered students engaged with any lectures? Potential barriers could range from user experience flaws and a lack of compelling contents to confusion about how to begin their educational journey. Addressing these challenges can be approached through several strategic actions:

1. Conducting Platform Usability Tests: Identifying and resolving navigational issues or bugs that could hinder user interactions.
2. Curating and Expanding Content Offerings: Ensuring the contents that are not only relevant but also resonates with potential learners, possibly by tailoring it to meet the interests and needs of a broader audience.
3. Enhancing User Onboarding: Streamlining the user journey to include guided learning paths that help new users find and star courses more effortlessly.

Monthly Onboarded Students
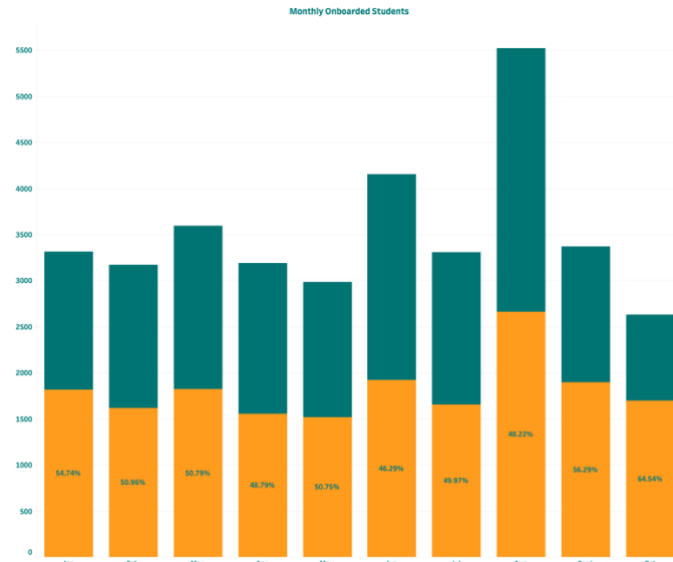
Additionally, the monthly onboarding rates, illustrated by a stacked bar chart, show variability between 46% and 64%. Notably, October shows a peak at 64%, a figure slightly skewed since the analysis excludes the last 11 days of the month. This variability and the peak in October suggest temporal influences on engagement that warrant further investigation to optimize ongoing student interaction and content delivery.

3. *How do students engage with the platform (minutes and average minutes watched) based on student type (free-plan or playing)?*

Filters	Registered Students	% Onboarded Students	Total Minutes Watched	Avg Minutes Watched
User Type: Free, Start Date: Jan 01 22, End Date: Oct 20 22	34,022	51.54%	490,762	28.96

Filters	Registered Students	% Onboarded Students	Total Minutes Watched	Avg Minutes Watched
User Type: Paid, Start Date: Jan 01 22, End Date: Oct 20 22	2,009	51.54%	1,344,826	669.4

Analyzing the data from Jan 1, 2022 to Oct 20, 2022, there is a notable disparity in engagement between free-plan and paying students on the platform. Free-plan students watched approximately 491,000 minutes in total, while their paying counterparts accumulated about 1,345,000 minutes. This significant variance can be attributed to several factors influencing user behavior and engagement.

Free-plan students have access to limited content, approximately 30 minutes per course, which might affect their motivation and consistency in using the platform. On average, these students engage for about 29 minutes. In contrast, paying students, who have full access to the platform, exhibit higher dedication and persistence, likely driven by the desire to maximize their investment. This group averages about 670 minutes of watch time.

A noteworthy observation is made during the middle of August when the average engagement for free-plan students increased to about 70 minutes. This peak was influenced by a promotional strategy where the 365 team made the platform entirely free for all students for a period.
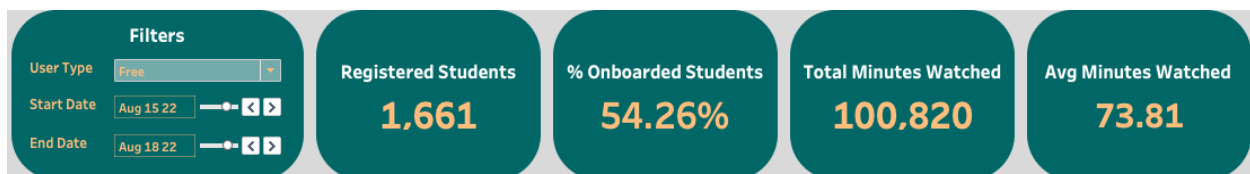

This temporary policy change led to increased engagement, as we will explore further while analyzing the combo chart.

4. Do students watch more content with time, and does it vary seasonally?

Total & Average Minutes Watched - Free-Plan Students
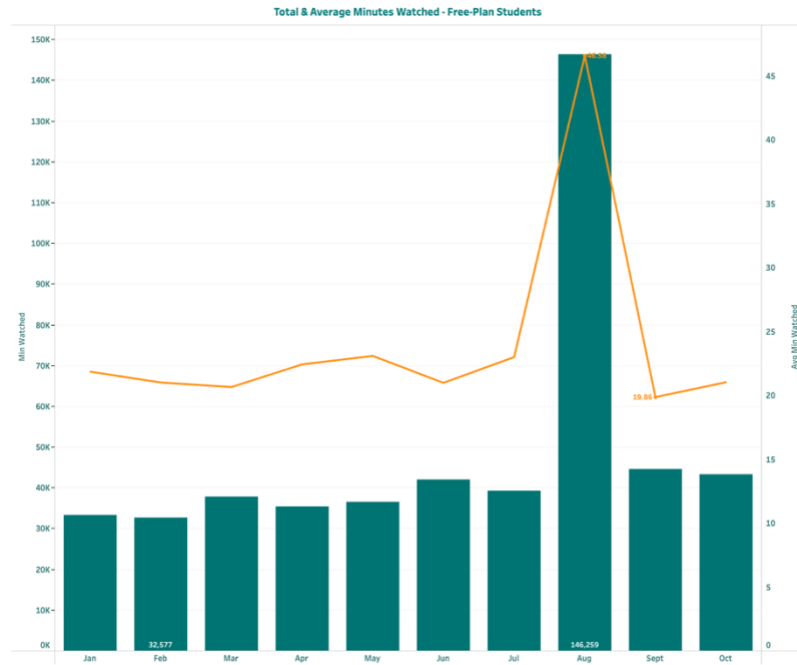
Turning to the combo chart provides clarity on the impact of promotional strategies on user engagement. Notably, there's a sharp increase in engagement among free-plan students in August, coinciding with the 'Free-Days' campaign launched by the 365 marketing team. This spike illustrates the effectiveness of the campaign in boosting participation among non-paying users.

Total & Average Minutes Watched - Paying Students
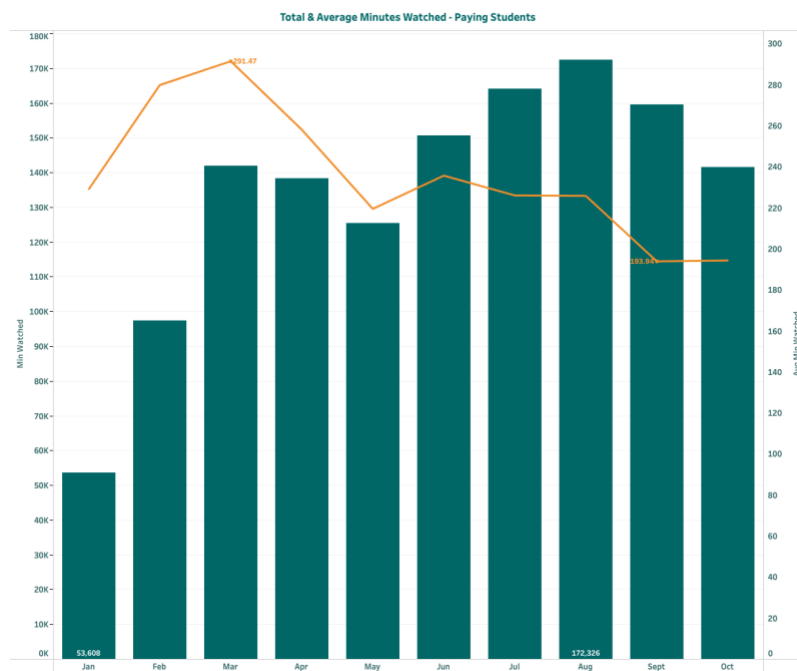
Conversely, paying students did not exhibit the same increase during this period. This group's access to the full site of platform features is uninterrupted and comprehensive, rendering the campaign less impactful for them.

Despite this, the data reveals nuanced trends: while there's a noticeable uplift in average minutes watched by free-plan students, the engagement among paying students shows more variability, with a slight overall decline in average minutes watched. This suggests differing engagement dynamics between the two groups, influenced by access levels and promotional activities.
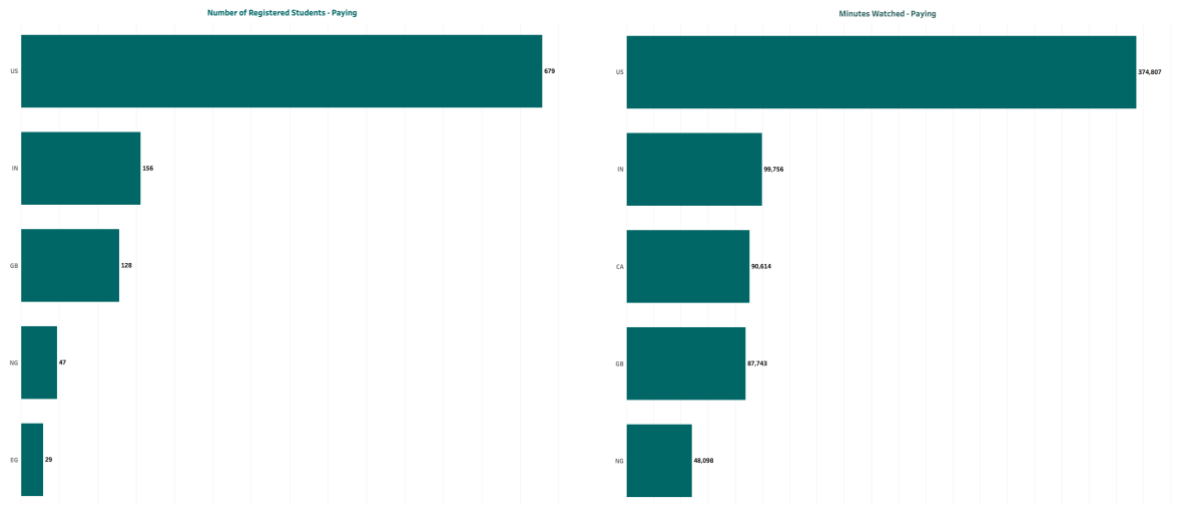
5. *Which countries have the most students registered, and does this number scale proportionally with the number of minutes watched per country?*
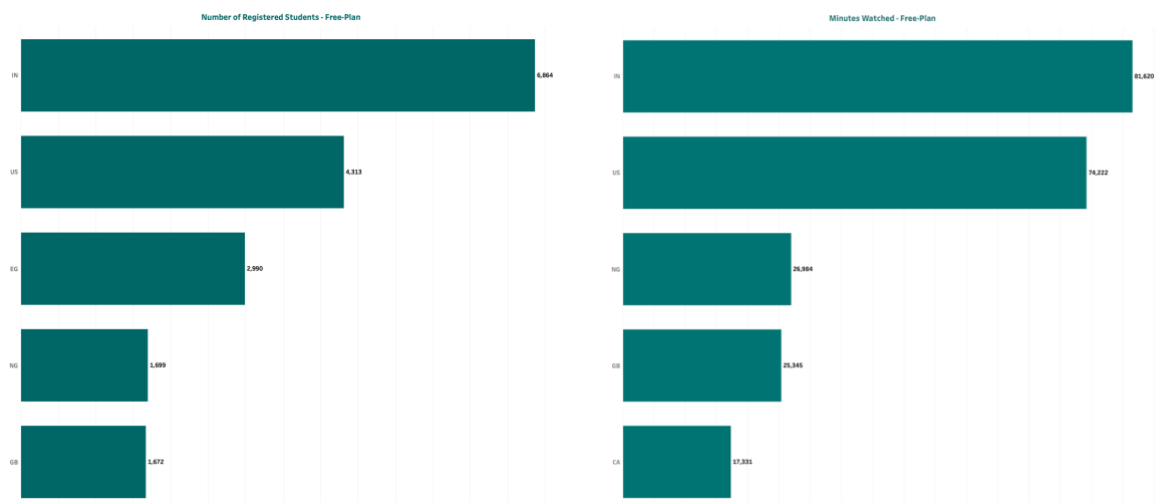
Delving into the engagement patterns of students registered between Jan 01, 2022 and Oct 20, 2022. This analysis, conducted separately for free-plan and paying students, yields intriguing insights into user behavior by geography.

For free-plan students, a significant majority of registrations and course activity originates from India, highlighting as the most active within the free segment. In contrast, paying students from the United States lead in both registrations and minutes watched, suggesting a strong engagement from this group.

Number of Registered Students - Paying

Country	Value
US	679
IN	156
GB	128
NG	47
EG	29

Minutes Watched - Paying

Country	Value
US	374,807
IN	99,756
CA	90,614
GB	87,743
NG	48,098

Additionally, the analysis reveals notable participation from paying student in Egypt, Nigeria, the UK, Canada, and India, underscoring a diverse international user base. Despite this, the funnel charts indicate a mismatch across countries between the volume of registered students and actual engagement measured in minutes watched. This discrepancy suggests varying levels of commitment and interaction with the platform among different nationalities.