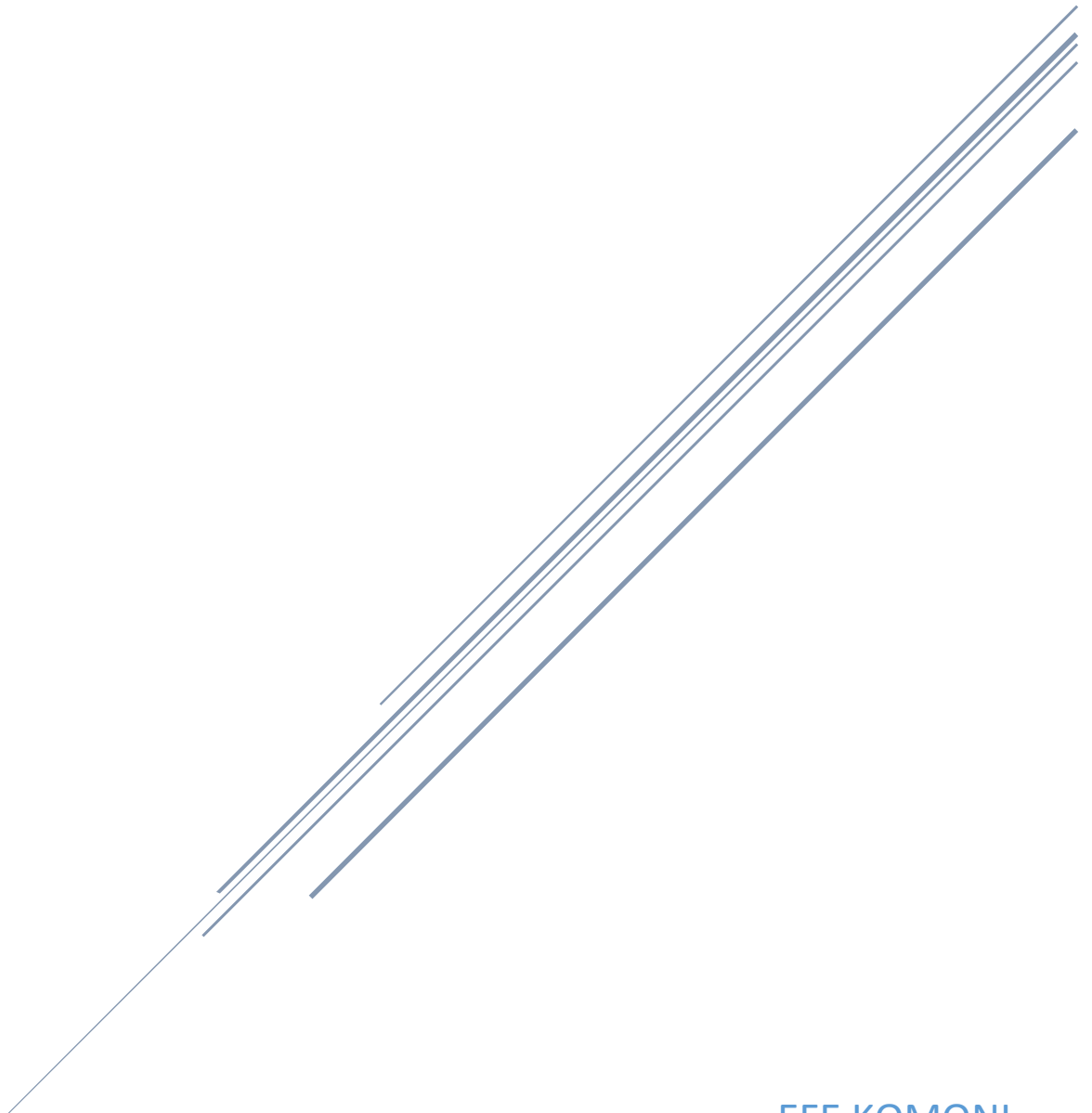


# AN ANALYSIS OF UDEMY COURSE DATA

An explorative analysis into the udemy course data to find meaningful insights



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## **Professional Background**

### **Data Analyst**

Efe Komoni is a Data Analyst with 2 years of extensive practical experience in finding meaningful insights from data. Efe specializes in Data cleaning, analysis and creating visualizations that are relevant to the stakeholders and the business problem. He believes that effective data storytelling is key to delivering output and aids in the making of data-driven decisions.

Efe is a strong critical thinker with an eye for the not-so-obvious. He has a mastery of tools such as Excel, R, SQL, Tableau and Python. He does not have any favorites as he believes that different tasks call for different tools. He is adaptive to new technologies.

In his spare time, he enjoys a game of soccer with friends. He can also be found volunteering in his community.

## **Project Description - Udemy Course Analysis**

Udemy is a tech education company that offers online learning to a large group of users with interest in different subjects. Udemy seeks to increase revenue generated from their popular courses.

4 datasets containing categorical and numerical data on all listed courses from 2011-2017 on Udemy across 4 subject titles have been provided. These subject titles include:

- Web Development
- Graphic design
- Business and Finance
- Musical Instruments

This project was designed to find areas that could be exploited or improved upon to increase revenue. I merged the different data sheets into a single sheet for analysis. This merger resulted in 3677 rows and 15 columns. The data was cleaned and analyze using Google sheets and visualization was done using Tableau and Google Sheets (Pivot Tables)

## **Design of the Project**

I ensured data reliability, originality, and comprehensiveness.

### **Data Analysis**

I cleaned and analyzed the data using Google Sheets. I took the following steps to ensure the data was clean and ready for analysis

- I removed blank cells using the filter and delete functions
- I renamed columns to follow a similar format
- I removed whitespaces and duplicates using the TRIM and Remove Duplicates function
- I split the datetime column into time and date using the MID, LEFT, and RIGHT functions.
- I created 3 new columns namely; 'date\_of\_publish', 'time\_of\_publish', and 'free\_beginner\_course'
- I created a VLOOKUP sheet to further analyze specific data
- I used the pivot function to create pivot tables which provided visual insight

### **Data Visualization**

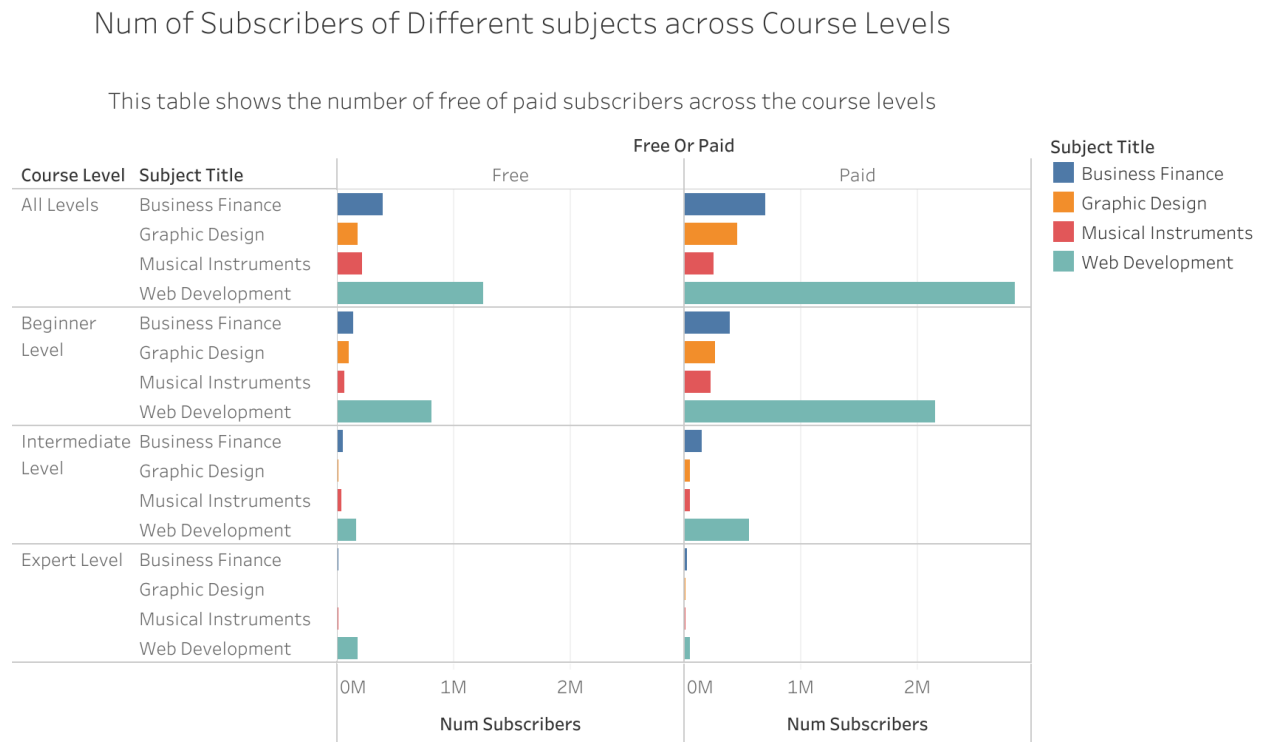
I chose to use Tableau and Pivot tables to visually present the data in figures and tables. I opted for these tools because they are able to highlight the most important points in the data.

## Findings

Tableau Public and Pivot Tables have been used in this project to create visualizations that provide insight into trends and patterns from which solutions can be inferred.

Below are the visualizations and their corresponding analysis

**Figure. 1**



From the chart above, it can be observed that Web Development has the highest number of subscribers across all course levels. This beats the other subject titles by a landslide. This could be due to a very high demand for web developers. It is followed by the Business and Finance Category.

It can also be observed that 'All Levels' and 'Beginner Level' courses have the most subscribers across all subject areas

It is also observed that Paid courses have more subscribers. This could be due to a public perception of free and paid commodities or the quality of the course content. We will view the course ratings next

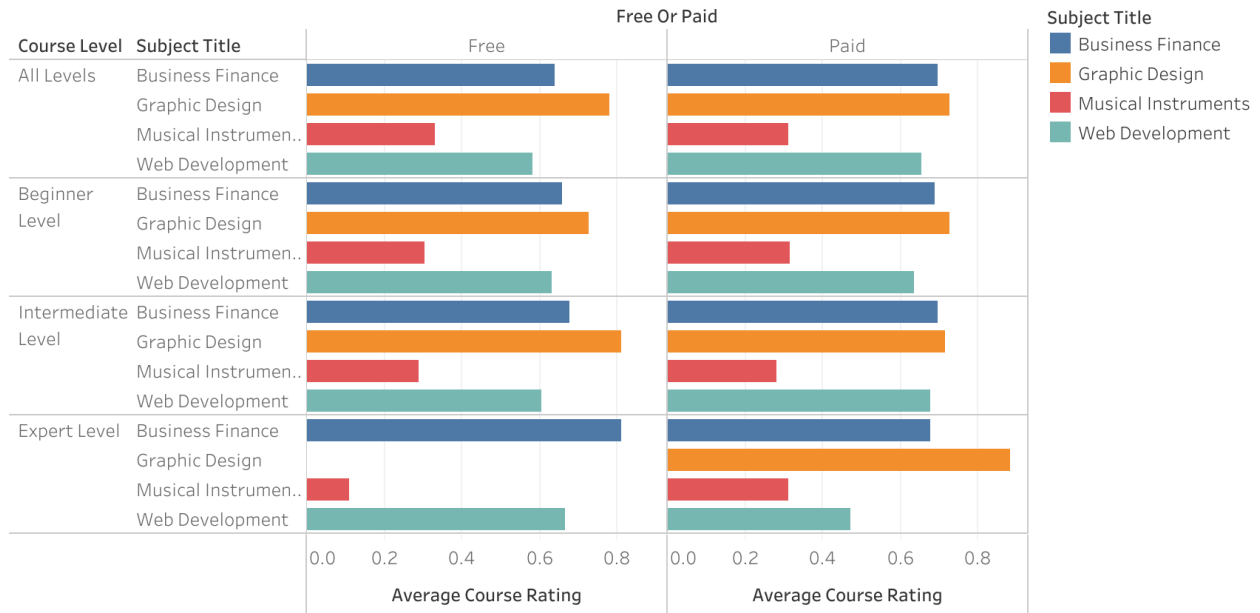
Table 1

<i>subject_title</i>	AVERAGE of num_subscribers
Business Finance	1569.026868
Graphic Design	1766.026578
Musical Instruments	1245.130882
Web Development	6635.024938
<b>Grand Total</b>	<b>3199.260881</b>

Table 1 shows that Web Development courses on an average have 4 times the number of subscribers other subject titles have. This is an avenue that should be exploited by delivering on promises and optimizing the Web Development courses for users,

Figure. 2

Average course ratings of paid or free courses across different course levels

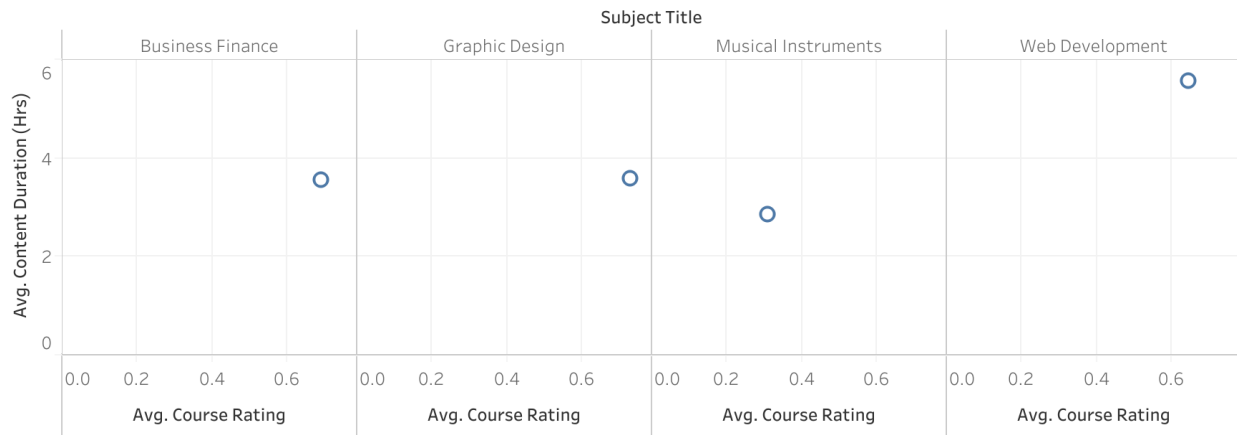


The above chart lets us see that on an average, the students gave higher ratings to paid courses than they gave to free courses. However, Business Finance and Web Development Free courses in the Expert category received higher ratings than their paid counterparts.



Figure. 3

Average Course Rating Vs. Average Course Duration



- Figure 3 shows that Web Development courses have the longest duration. It can also be seen that this duration does not translate to a higher rating. Web development courses on an average are 3<sup>rd</sup> in ratings.
- Musical Instruments courses have the lowest duration and rating.
- Business Finance and Graphic Design courses share very similar ratings and course duration. There might be a correlation between the content duration and rating.

## **Analysis of Findings**

Overall, the Web Development subject category has the highest number of subscribers (7,981,935) followed by Business Finance (1,868,711). However, ratings show that despite the popularity of web development courses, they were given an average rating of 0.64 behind Graphic Design (0.73) and Business Finance (0.69) courses. Musical instruments received the lowest average ratings (0.31). This data shows that while web development courses could be making money for the company, the users are not very satisfied with the outcome. Improving their learning experience could mean more consumer satisfaction, more subscribers and in turn, more revenue

Web development courses also had the highest course prices, course duration and number of lectures. This shows that the users do not mind paying for these courses but they must bring value to the user.

Musical Instrument courses had the lowest number of subscribers, ratings, course prices, course duration and number of lectures on an average.

Udemy needs to focus on improving the Web Development and Musical Instruments subject areas in order to increase more revenue

## **Further Analysis of the Why**

Web Development courses recorded the largest number of subscribers but came 3<sup>rd</sup> in ratings

Why?

- This could be due to the fact that the users did not get the information they needed from the course

Why?

- The course duration may have been too lengthy so they could not get to the end and gave up in the process

Or

- The course did not deliver on the promises

Or

- The students did not learn any new thing from the course

Why?

- The course tutor may not be knowledgeable enough
- The course may not be interactive enough
- There may be too much to cover in one single course
- The subject might be too difficult to explain

## **Conclusion and Recommendations**

A further survey should be carried out to find out why Web Development and Musical Instrument courses received the lowest ratings.

A survey should also be carried out to determine if course duration has an effect on the perceived course ratings. If so, adjustments can be made to deliver optimized products to the users.

The outcome of this survey will give the Udemy Board the needed information needed to optimize these courses in order to increase revenue. The prices of the courses do not need to be increased yet.

## **External Links**

Google Sheets – <https://docs.google.com/spreadsheets/d/1JQzq8oh2okmDsM-uXi-LO6yRjwrsO9-986w7m3MvWNI/edit?usp=sharing>

Tableau

[https://public.tableau.com/views/UdemyDataAnalysis\\_16284535673240/Sheet3?:language=en-US&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/UdemyDataAnalysis_16284535673240/Sheet3?:language=en-US&:display_count=n&:origin=viz_share_link)