Visualization for Audience Performance

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Executive Summary

(James, G. (2020, Feb 24).) Viacom wants to understand if they are reaching the right audience on their social media channels by analyzing the performance of various ad campaigns that target various audiences. Provided analysis using real-world data to understand what drives success in reaching the right audience for the right objective. Analysis results show that Viacom parameters like impressions, clicks, cpm, ctr variation is not much with the data. It is reflecting that Viacom rampaging to right audience.

Agenda

Learning Viacom Introduction

Defining the Statement of the problem

Narrow down the Purpose of the study

Research questions   hypotheses or goal

further experiments to be run

Review of the literature

List Methods to get solution the problem

Data collection instruments, variables, and materials

Data analysis procedures

Conclusion

About Viacom

Viacom is an entertainment company and creates media content. The content created by Viacom is delivered in Television channels. Viacom planned to increase the business. Viacom also uses content for promoting in social media like Facebook and twitter. Based on the user history and demographic information Viacom targets content to those user groups, by this way targeted audience enjoy the content.

Viacom wants to understand if they are reaching the right audience on their social media channels by analyzing the performance of various ad campaigns that target various audiences. Provide analysis using real-world data to understand what drives success in reaching the right audience for the right objective

Introduction

Analyze the performance of Viacom content across the various audience types and how much does it cost to target them. The following topics are considered for Analyzing.
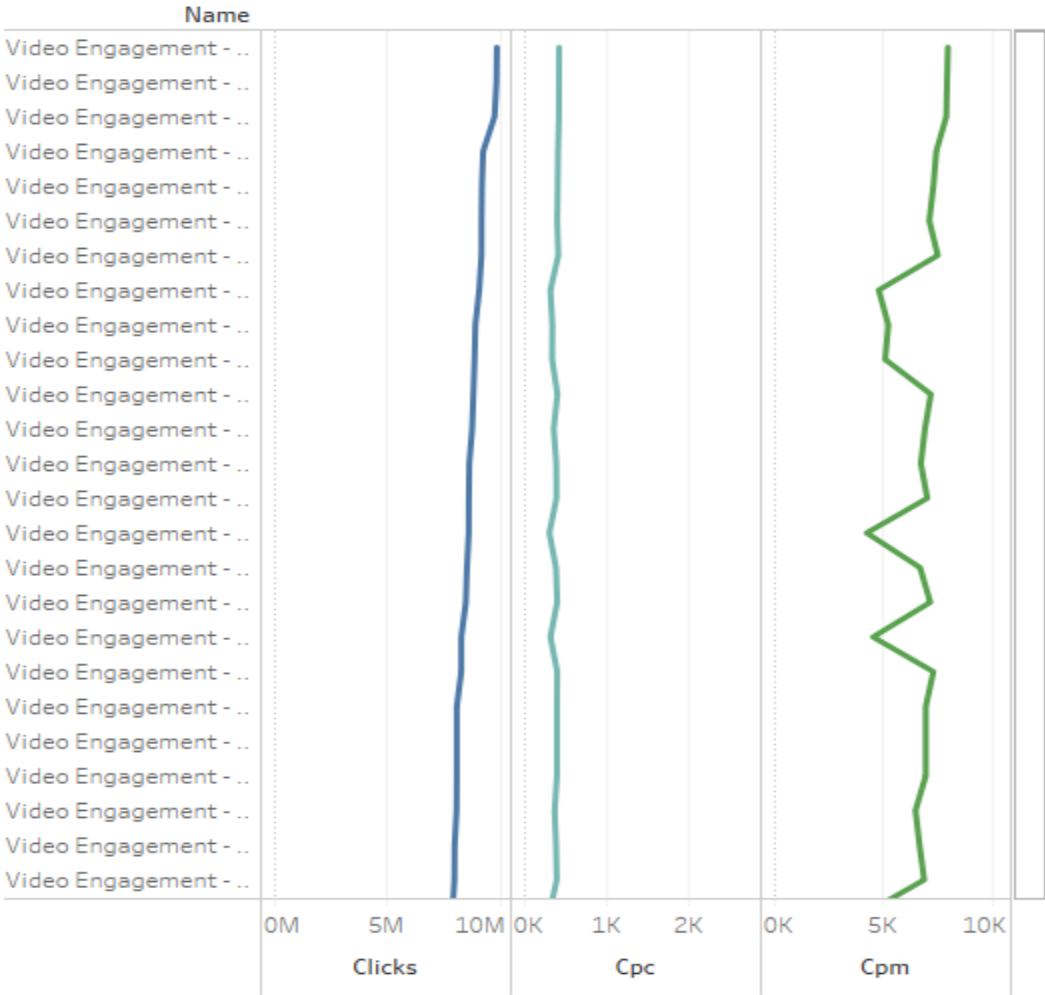
- Like how many impressions

- Video views

- Engagements have these audiences accrued

- How many times have the audiences been targeted for various ad campaigns?

Analyze and understand the size of the audiences and how that may relate to performance of given ad campaigns by optimize the following topics.

- Total impressions

- Total reach (unique impressions)

- Total video views

- Total engagements

- Engagement rate (engagements/impressions)

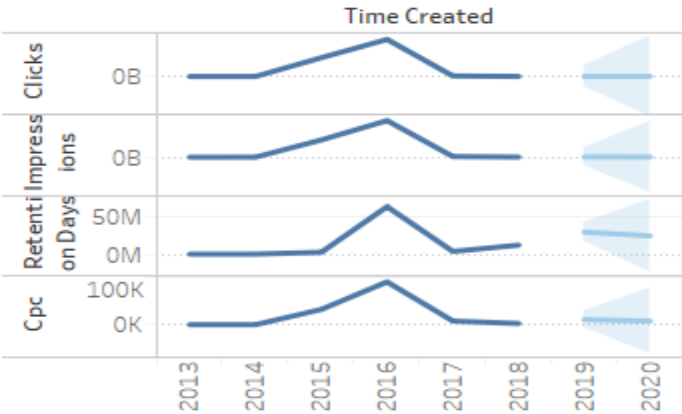- High video retention low cost
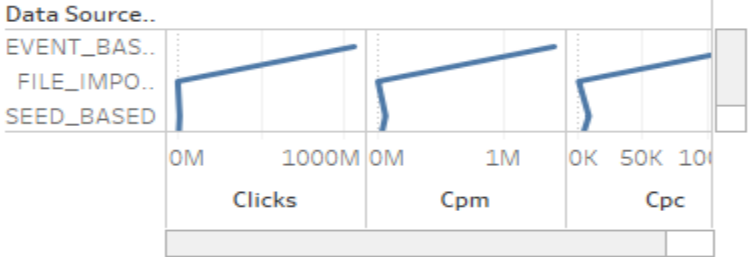
Dash Board (Frye, C. (2015, 9 9))

Time Create effects on the CPC, CPM, Clicks

- This graph shows the effect of the Time on different factors like CPI,CPM or clicks. By seeing the plots all are having the same effect on the time created. Viacom has better performance during the year 2016. From 2017 it performed quite steadily.
- Fore cast for the feature also showing steadiness.
- Retention days decreased in 2017 and increasing steadily in the immediate past.

Tableau - Presentation

Time Created VS clicks,CPC,CPM and Fore Cast
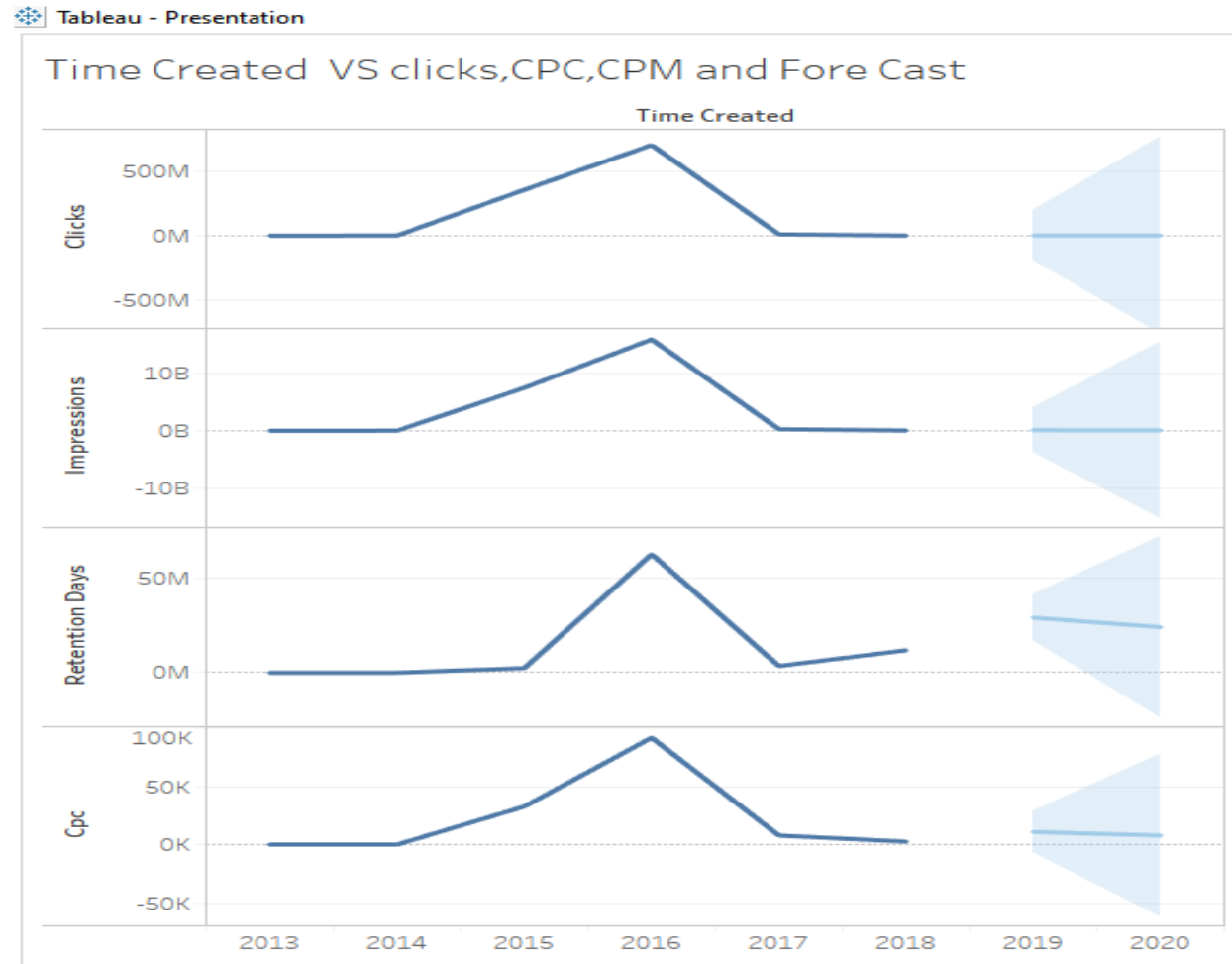
Effect of Data source Type on Clicks, CPM,CPC

- In all Data Source Types Event based Source type is most effective
- Seed based has minor impact on the Clicks, CPM, CPC
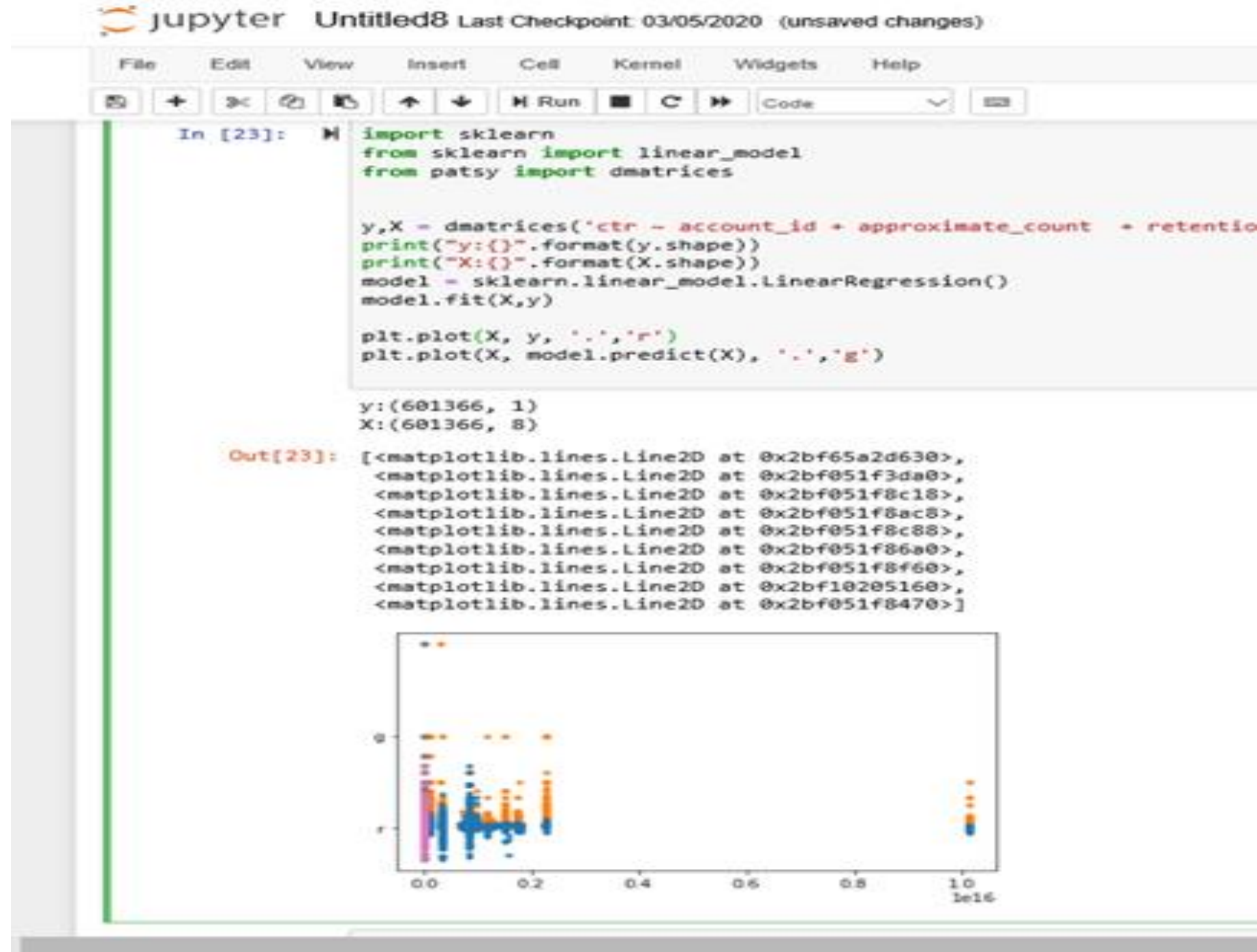- The Effect of Event type is almost same on the clicks ,CPM and CPC
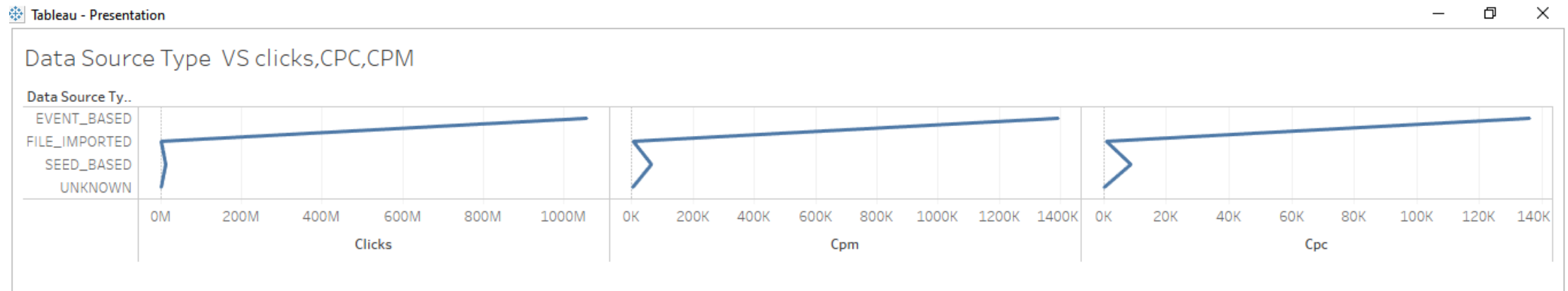
ne VS clicks,CPC,CPM

Name of the Video effects on the clicks, cpc , cpm.

- Name of the video on the clicks and CPC is minor.
- Name of video on CPM is changing as per name.

Build models of linear variation of CPM, CRT, Impressions, clicks. The following screen shot shows the linear variation ctr with other parameters of the data


Jupyter Untitled8 Last Checkpoint: 03/05/2020 (unsaved changes)

File   Edit   View   Insert   Cell   Kernel   Widgets   Help

Code

```
In [23]:    import sklearn
            from sklearn import linear_model
            from patsy import dmatrices


            y,X = dmatrices('ctr ~ account_id + approximate_count  + retentio
            print("y:{}".format(y.shape))
            print("X:{}".format(X.shape))
            model = sklearn.linear_model.LinearRegression()
            model.fit(X,y)

            plt.plot(X, y, '.','r')
            plt.plot(X, model.predict(X), '.','g')


            y:(601366, 1)
            X:(601366, 8)

Out[23]:    [<matplotlib.lines.Line2D at 0x2bf65a2d630>,
             <matplotlib.lines.Line2D at 0x2bf051f3da0>,
             <matplotlib.lines.Line2D at 0x2bf051f8c18>,
             <matplotlib.lines.Line2D at 0x2bf051f8ac8>,
             <matplotlib.lines.Line2D at 0x2bf051f8c88>,
             <matplotlib.lines.Line2D at 0x2bf051f86a0>,
             <matplotlib.lines.Line2D at 0x2bf051f8f60>,
             <matplotlib.lines.Line2D at 0x2bf10205160>,
             <matplotlib.lines.Line2D at 0x2bf051f8470>]
```
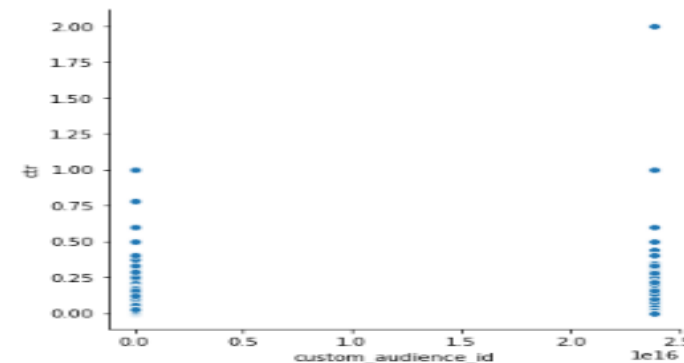
The following graph shows linear relation between account id and Ctr.
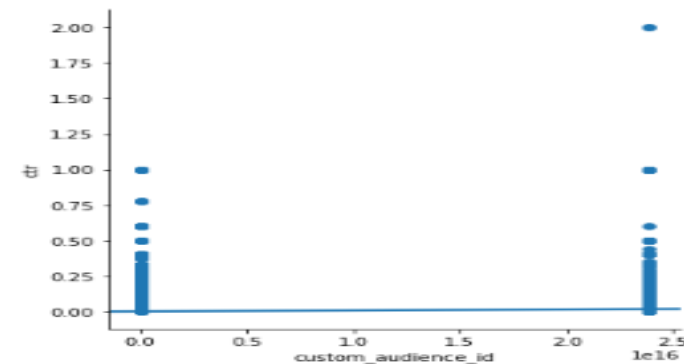
Plotted few graphs for tracing the variation CPM, CRT, Impressions, clicks.
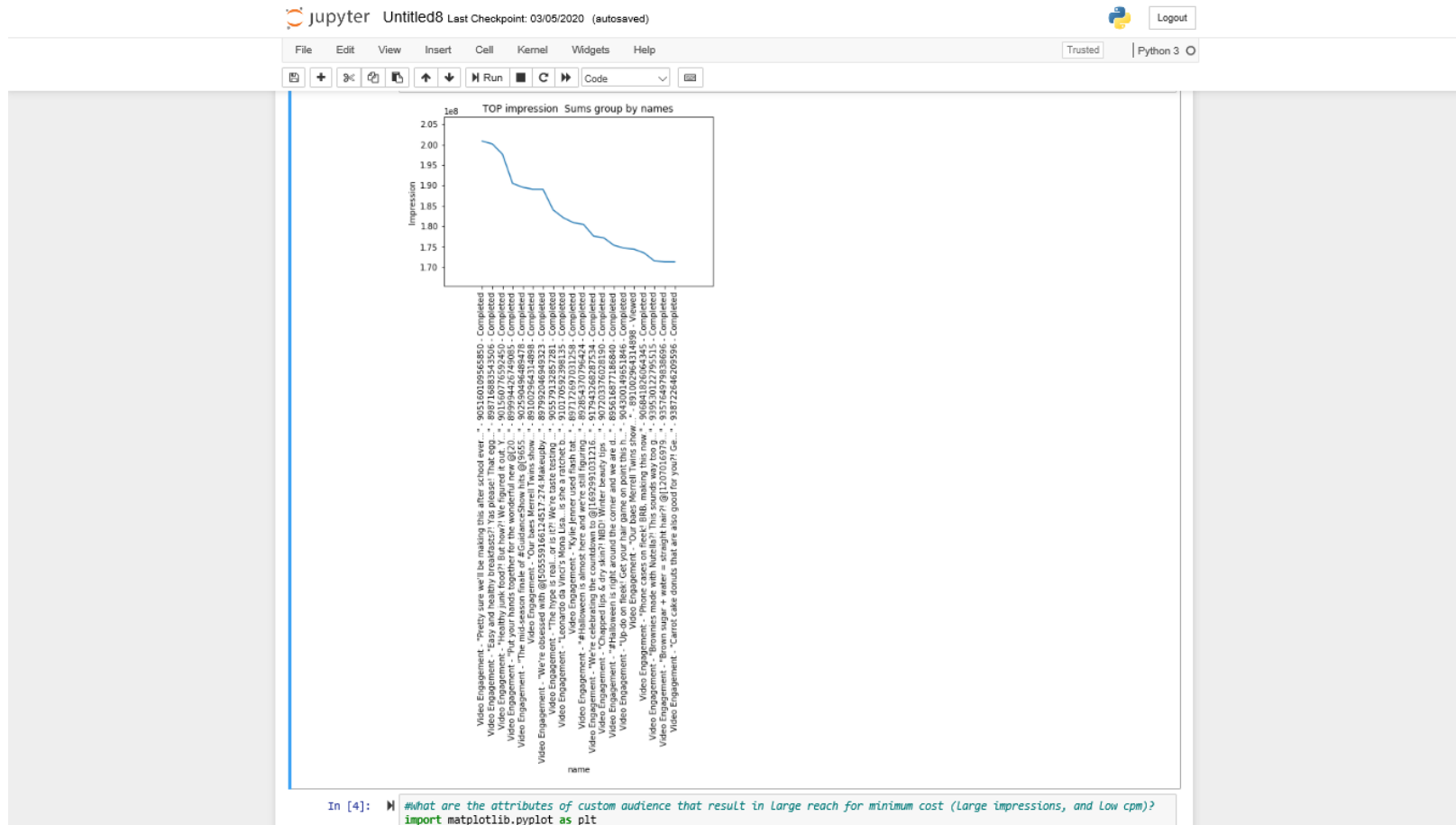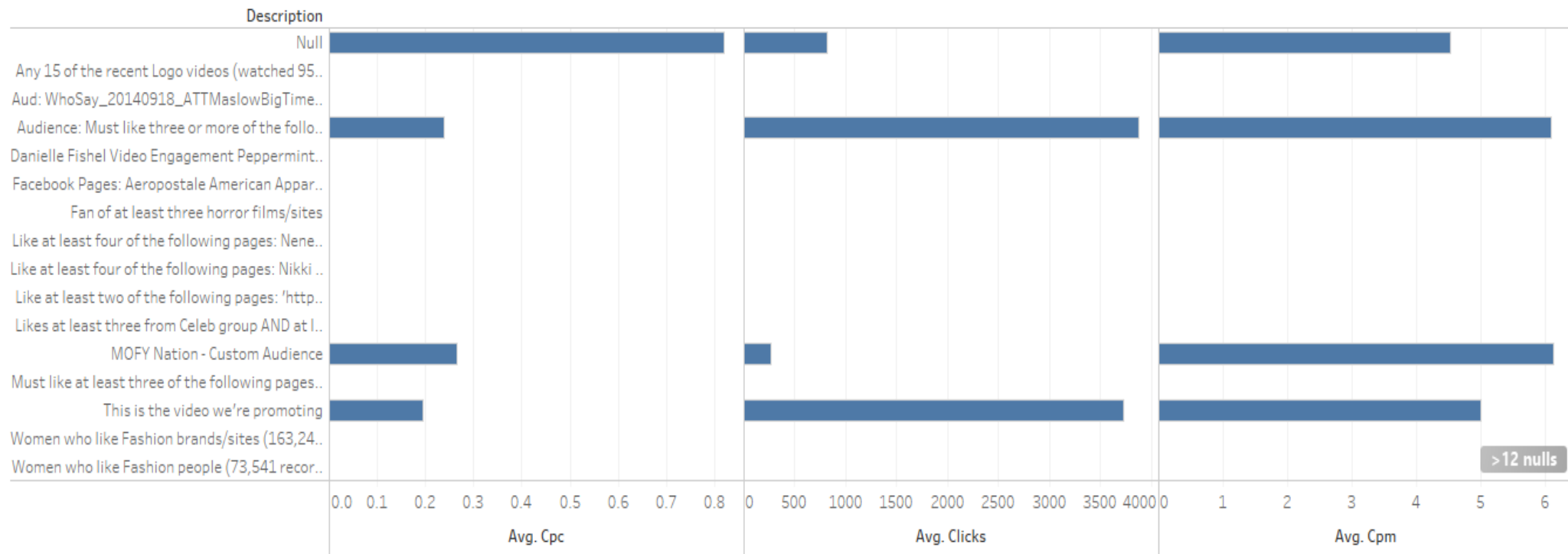
Variation of Data Source Type on Clicks , CPM, CTR
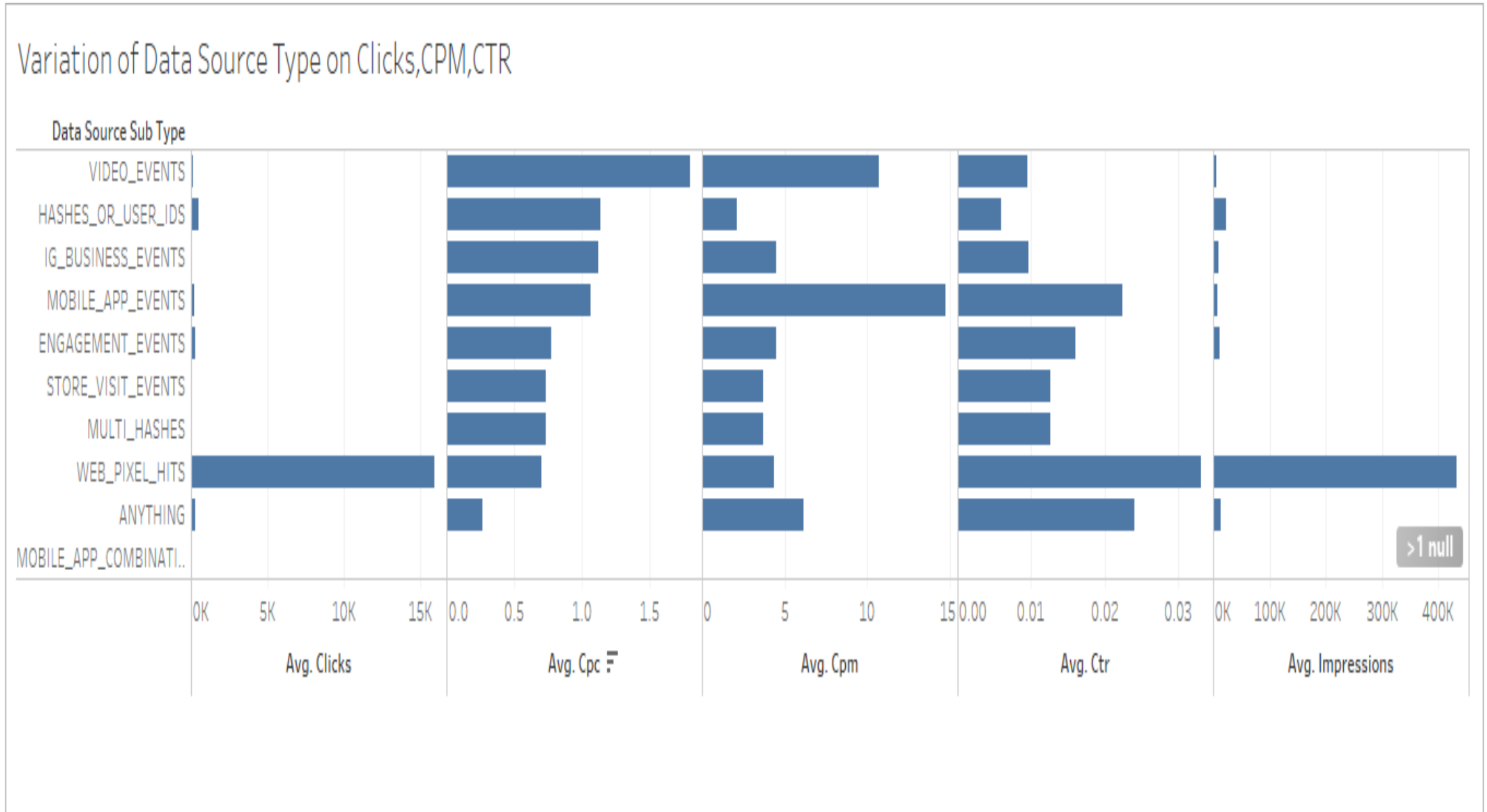
CPC ,Clicks , CPM variation with Description.

- Audience must like 3 or following pages and MOFY Nation Custom Audience, This is the video we are promoting has major effect on CRT,CPM, Clicks.
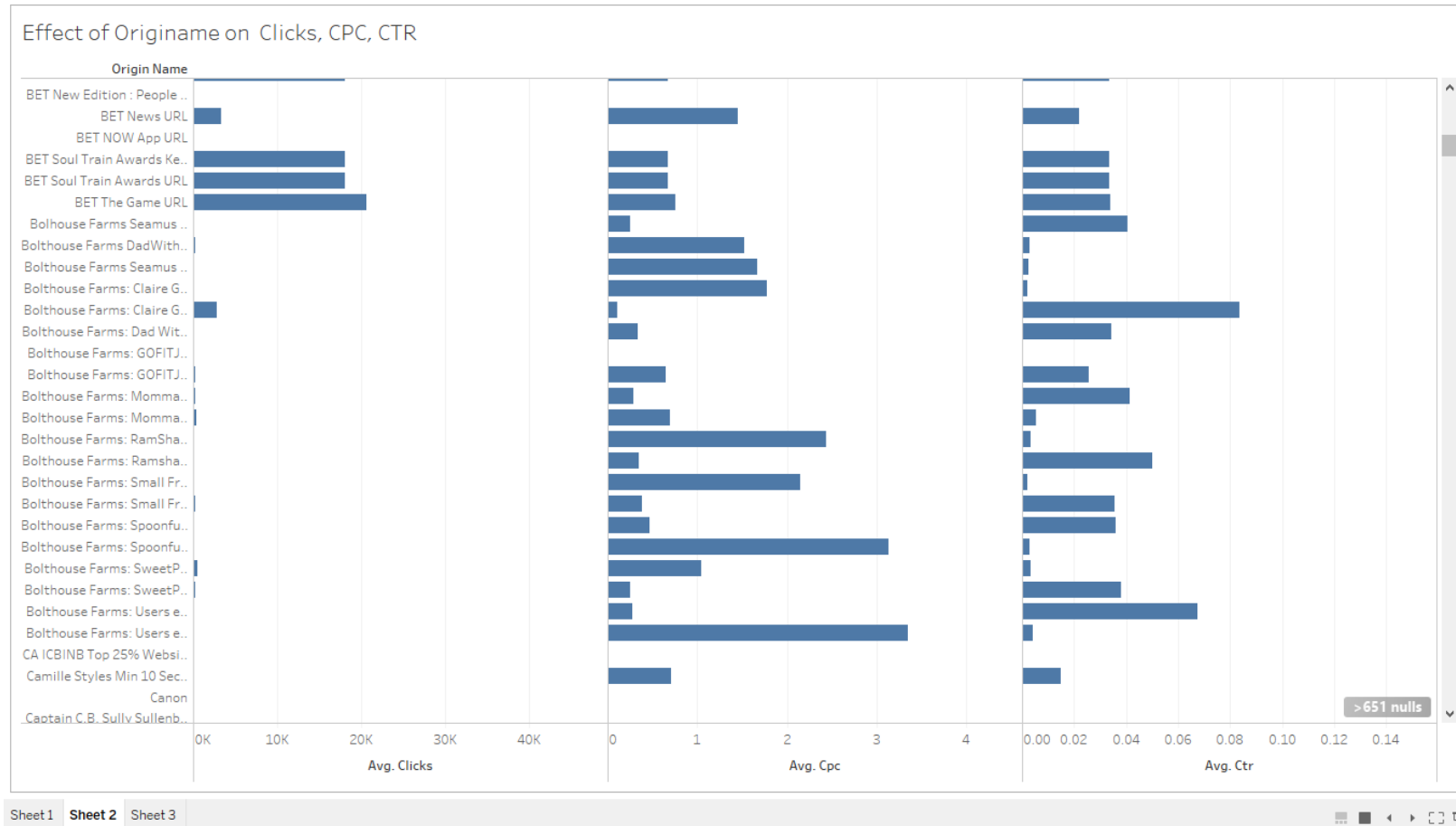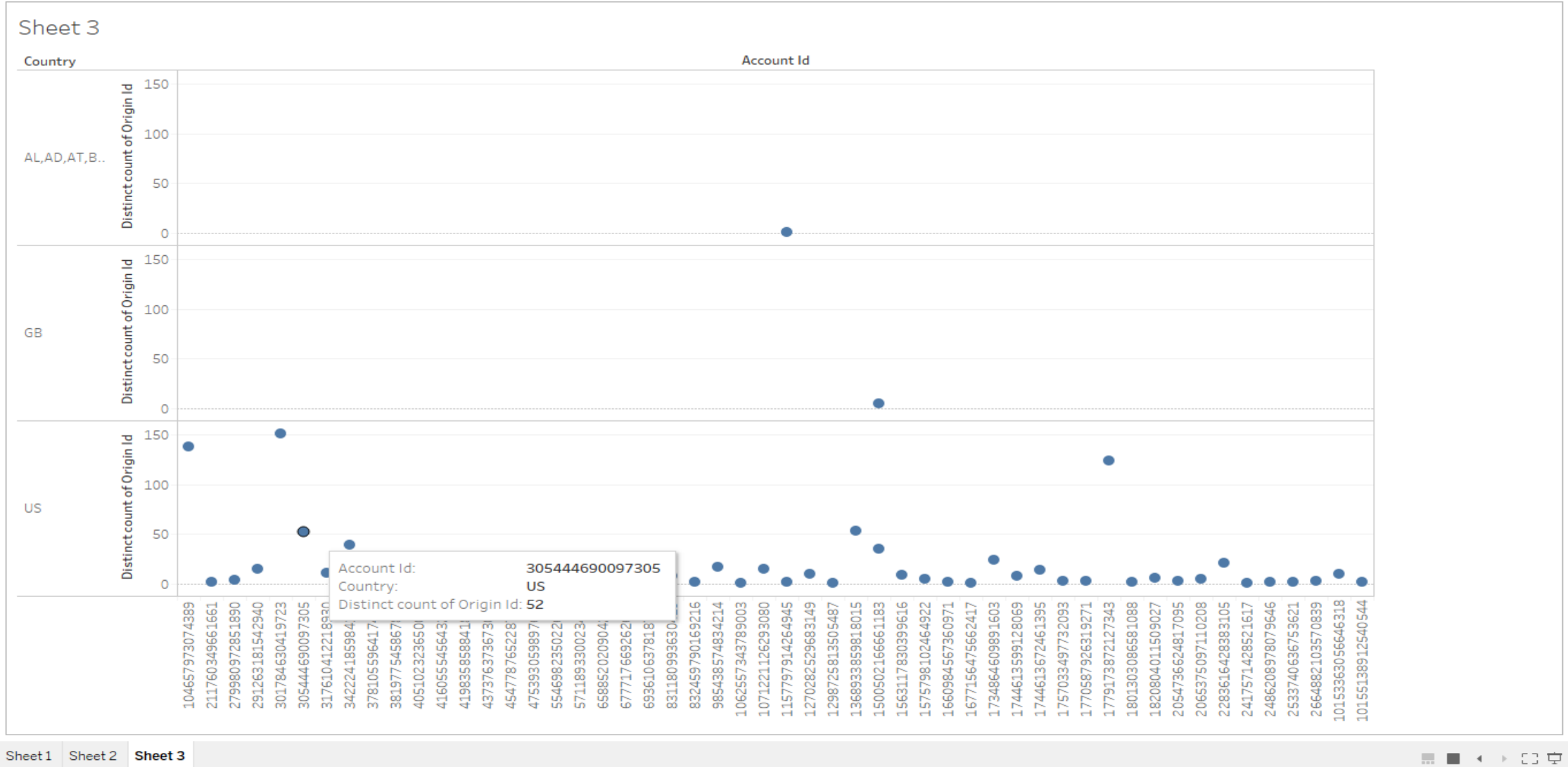
CPM, Impressions, Clicks sharing across country

- US is the Origin county is for many programs.
- GB is origin for few programs
- Viacom is not receiving any clicks or impressions.
- GB has little effect on approximate account.

CPM, Impressions, Clicks sharing across country
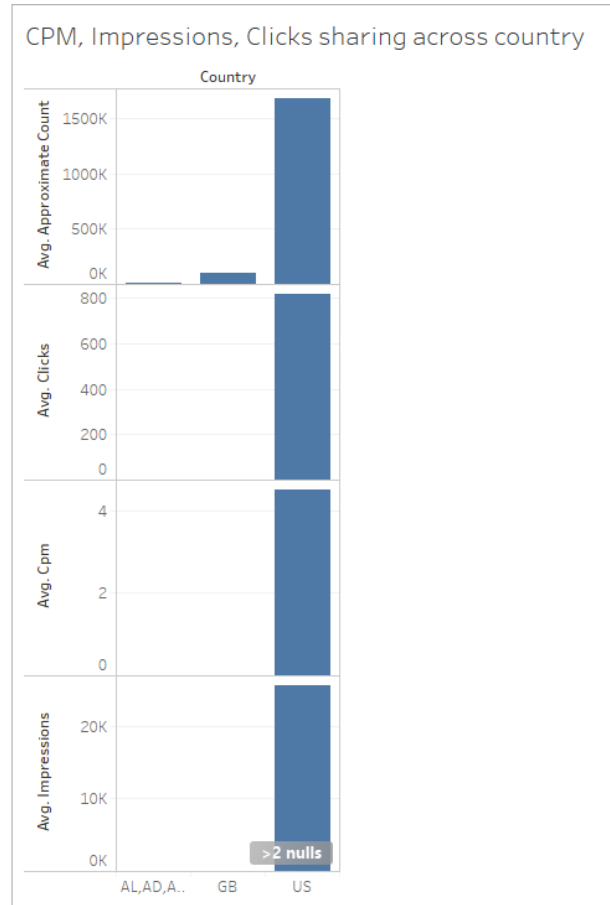
Effect of Original name on Clicks, CPC, CTR

Country, Account and Origin Id count relation

Findings

- The Time on different factors like CPI,CPM has the same effect on the time created. Viacom has better performance during the year 2016. From 2017 it performed quite steady.

- Forecast for CPM, CRT, Impressions, clicks shows steadiness of their effect on performance.

- Retention days effect decreased till 2017 and increasing steadily in the immediate past.

- In all Data Source Types Event based Source type is most effective

- Seed based has minor impact on the Clicks, CPM, CPC

- The Effect of Event type is almost same on the clicks ,CPM and CPC

- There is linear relation between account id and Ctr.

- Name of the video on the clicks and CPC is not much. Name of video on CPM is changing as per name.

- Name of the video on the clicks and CPC is minor. Name of video on CPM is changing as per name

Recommendations

- Continue focusing on the same way will help to improve business. Viacom forecast curves are increasing sturdily.

- Viacom doing better business with web pixel hits ,mobile app events and video events.

- Increase shows of event based type.

- Viacom doing good business they needs to focus on other countries

Limitations

- Nulls are not removed. Data files provided are used as it is.
- Could not complete clustering of the date due to time and complexity.
- Model is build by considering few fields. Could not consider all the columns.
- We can do more analysis on the lookalike data joined with custom audience add data.

References

- James, G. (2020, Feb 24). How to Write a Compelling Executive Summary. Inc. Retrieved from https://www.inc.com/geoffrey-james/how-to-write-a-compelling-executive-summary.html

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- Creswell, J. W. (2017). Research Design: Qualitative, quantitative, and mixed methods approaches. Retrieved from https://northeastern.blackboard.com/bbcswebdav/pid-13483009-dt-message-rid-69266389_1/xid-69266389_1

- Frye, C. (2015, 9 9). Lynda. Retrieved from Tableau 9 Essential Training: https://www.lynda.com/Tableau-tutorials/Tableau-9-Essential-Training/386886-2.html?org=neu.edu

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