

X Education Lead Scoring Case Study

Group Members:-

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Background

- X Education , An education company named sells online courses to industry professionals
- Many interested professionals land on their website
- The company markets its courses on several websites like Google. Once these people land on the website, they might browse the courses or fill up a form for the course or watch some videos

Problem Statement

- X Education gets a lot of leads but its lead conversion rate is very poor
- To make this process more efficient, the company wishes to identify the most potential leads, also known as 'Hot Leads'
- If they successfully identify this set of leads, the lead conversion rate should go up as the sales team will now be focusing more on communicating with the potential leads rather than making calls to everyone.
- We will help them to select the most promising leads, i.e. the leads that are most likely to convert into paying customers.
- We are required to build a model wherein we need to assign a lead score to each of the leads such that the customers with higher lead score have a higher conversion chance
- The CEO, in particular, has given a ballpark of the target lead conversion rate to be 80%.

Lead – Conversion Process

Lead to
Conversion
process

Lead Generation:
1. Ads on websites like
Google
2. Referrals

Visit to X Education
website by these
potential customers
(professionals)

Visitors either provide
Email id & Contact
Details
Or
View videos etc

Tele calling and Emailing
activity to all the leads

~30% leads get
converted

Proposed Solution:
A model to filter leads
so that leads to
conversion ratio is
80%+

Proposed Solution

Selection of Hot Leads

Leads Clustering

We cluster the leads into certain categories based on their tendency or probability to convert, thus, getting a smaller section of hot leads to focus more on.

Communicating with Hot Leads

Focus Communication

Since we would have a smaller set of leads to have communication with, we might make more impact with effective communication.

Conversion of Hot Leads

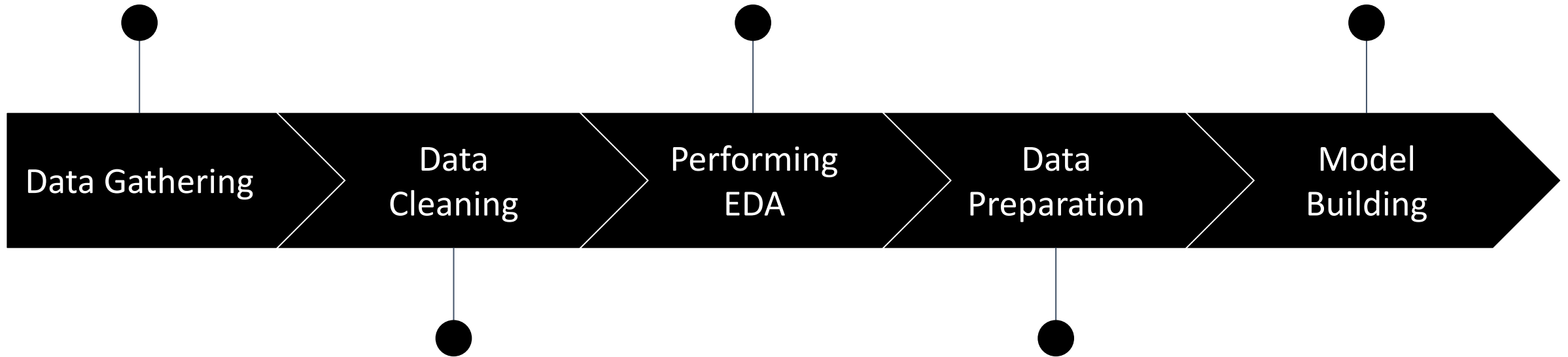
Increase conversion

Since we focussed on hot leads, which were more probable to convert, we would have a better conversion rate, and hence we can achieve the 80% target.

Loading & Observing the
past data provided by
the Company

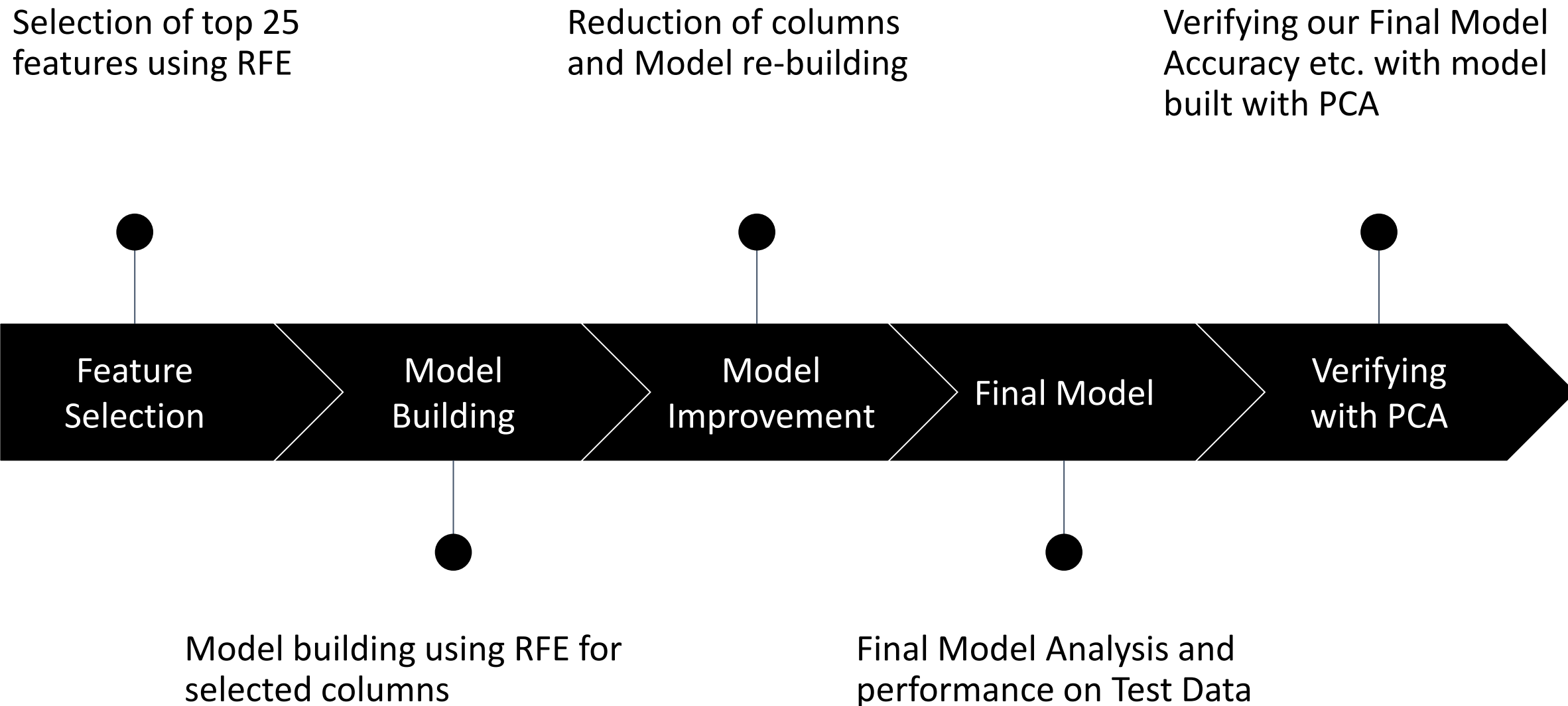
Univariate, Bivariate, and
Heatmap for numerical
and categorical columns

Performing pre-requisites
for RFE and Logistic
Regression



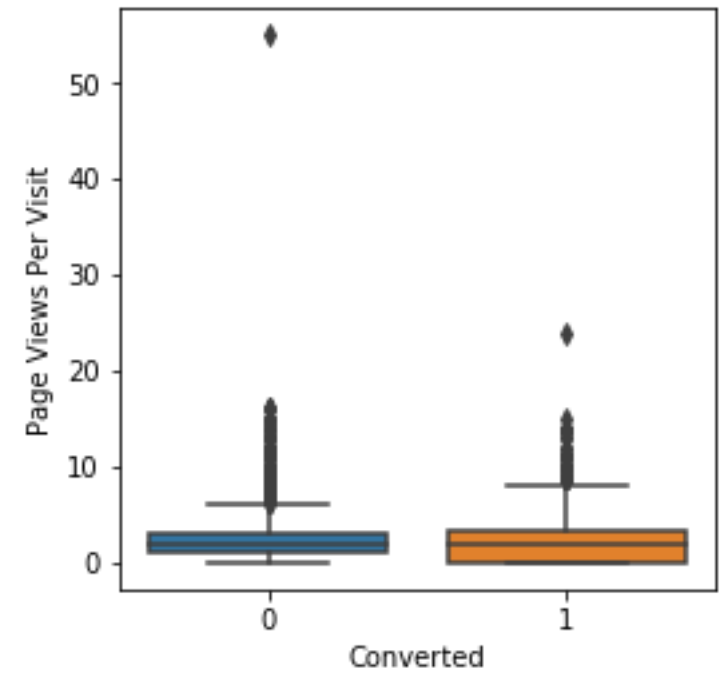
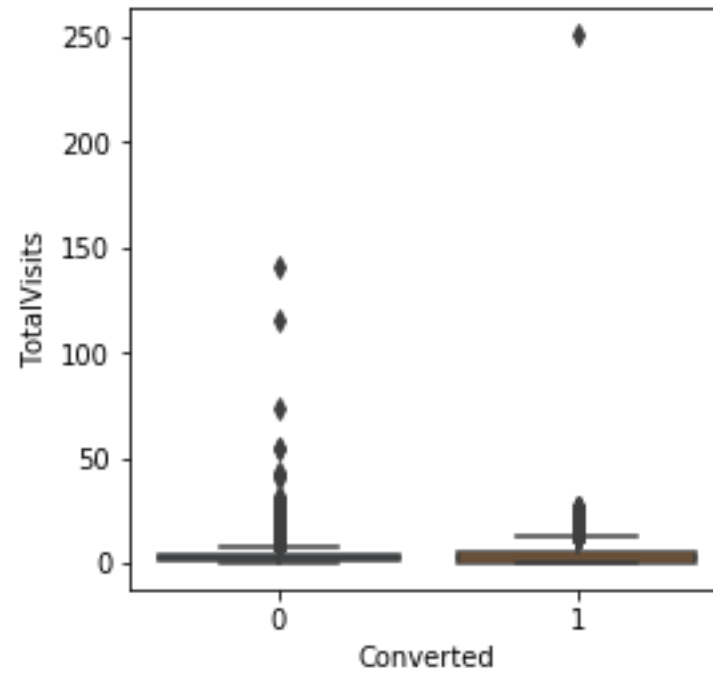
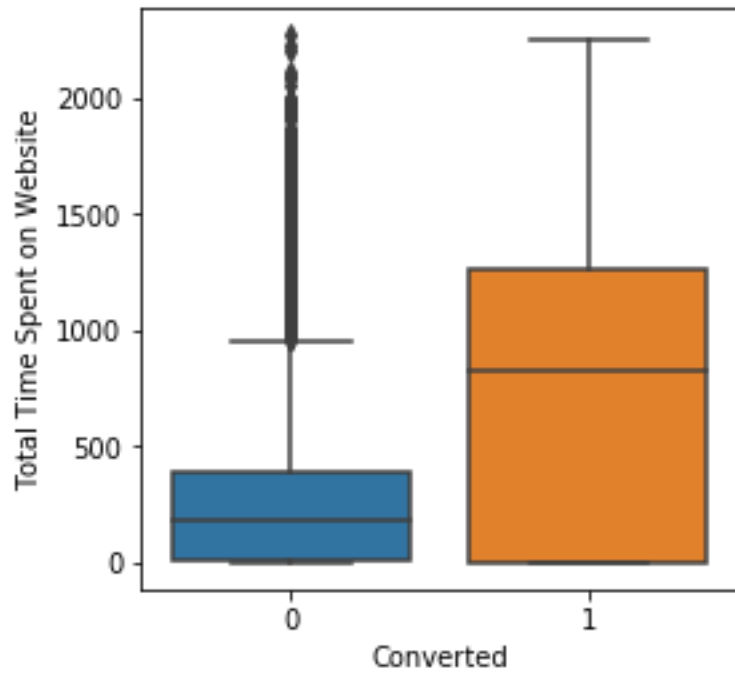
Duplicate removal, null value
treatment, unnecessary column
elimination, etc.

Outlier Treatment,
Feature-Standardization

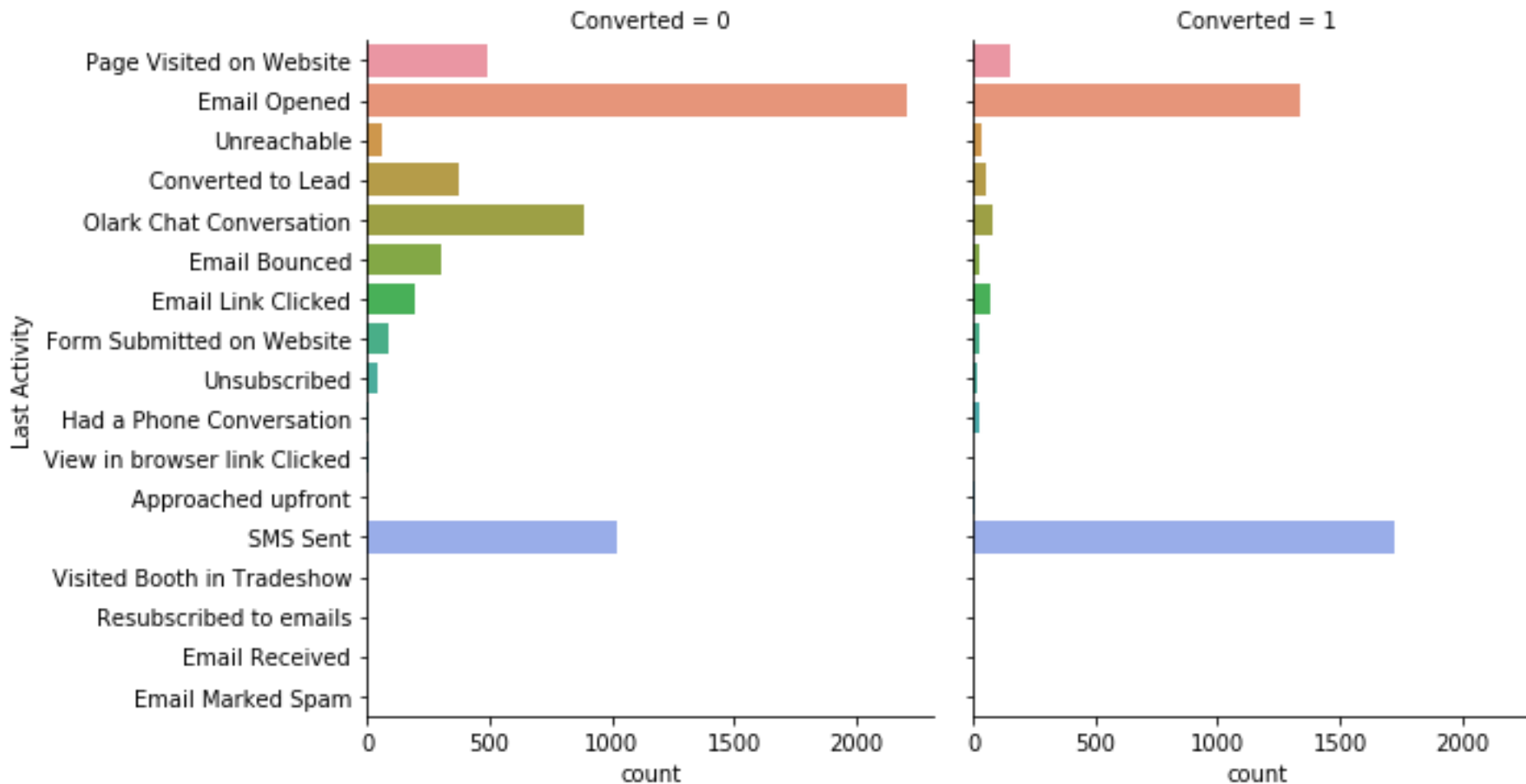


Plots (Visualization)

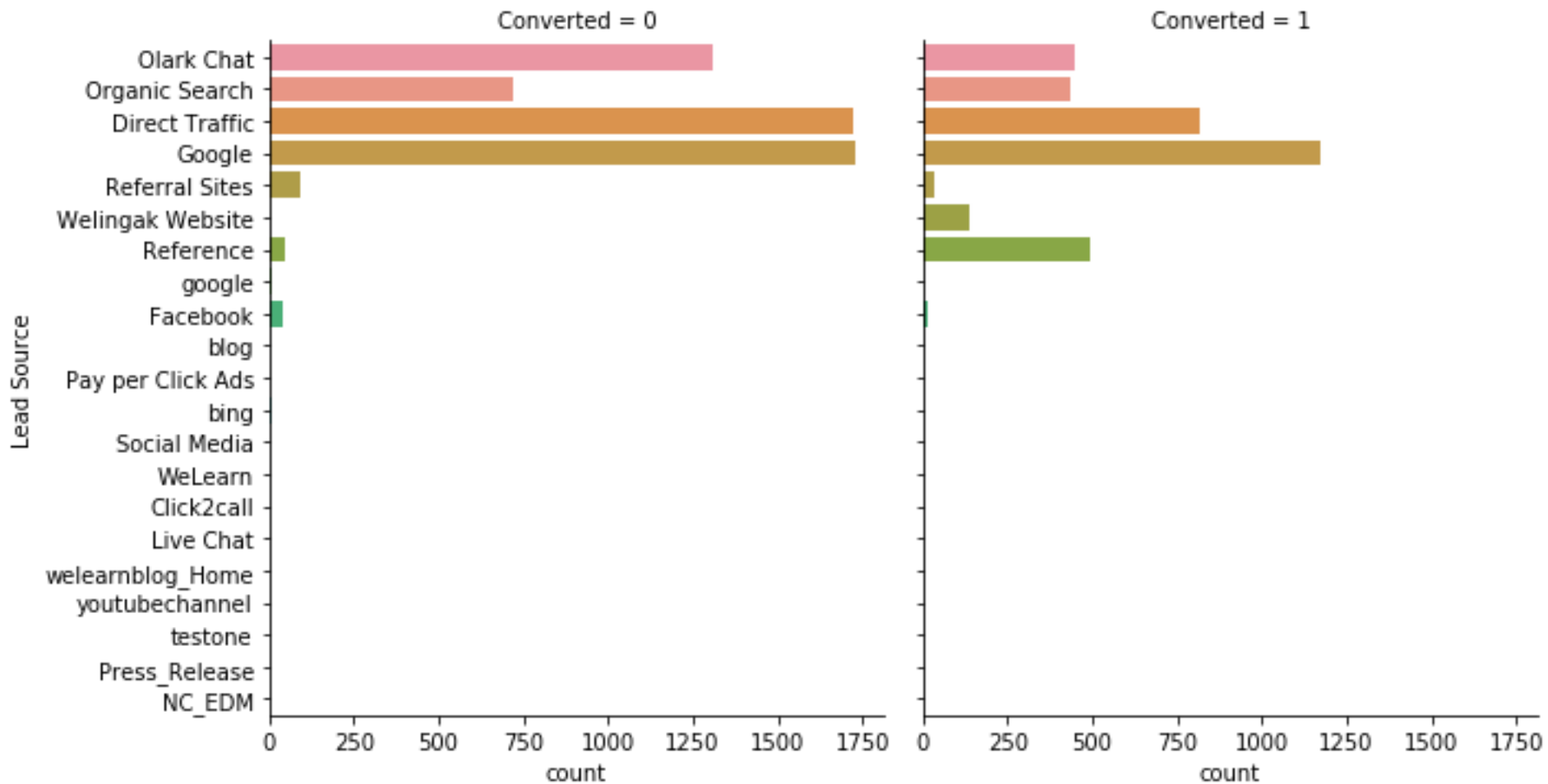




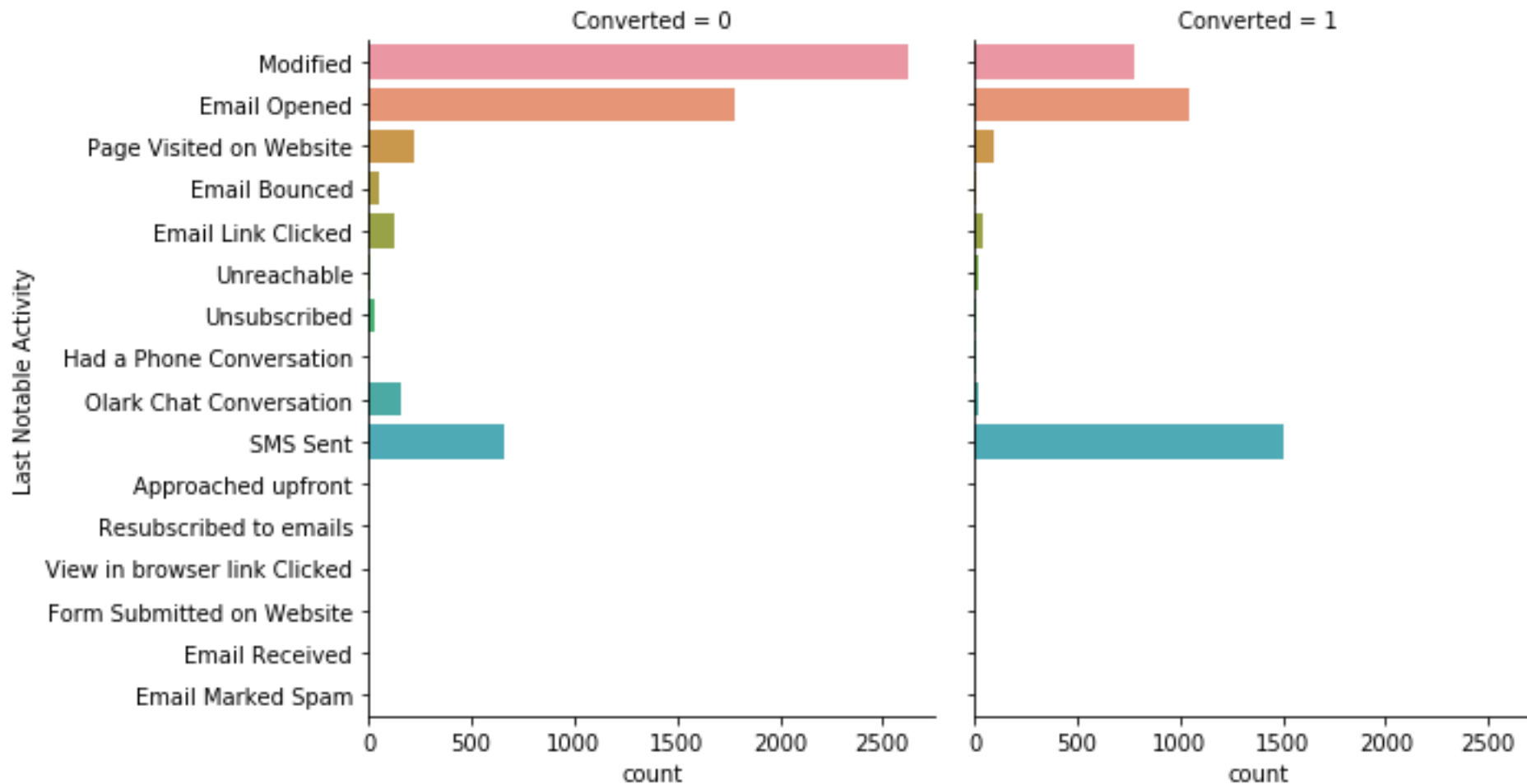
EDA plots depicting variation in numerical columns for those who Converted and those who didn't.



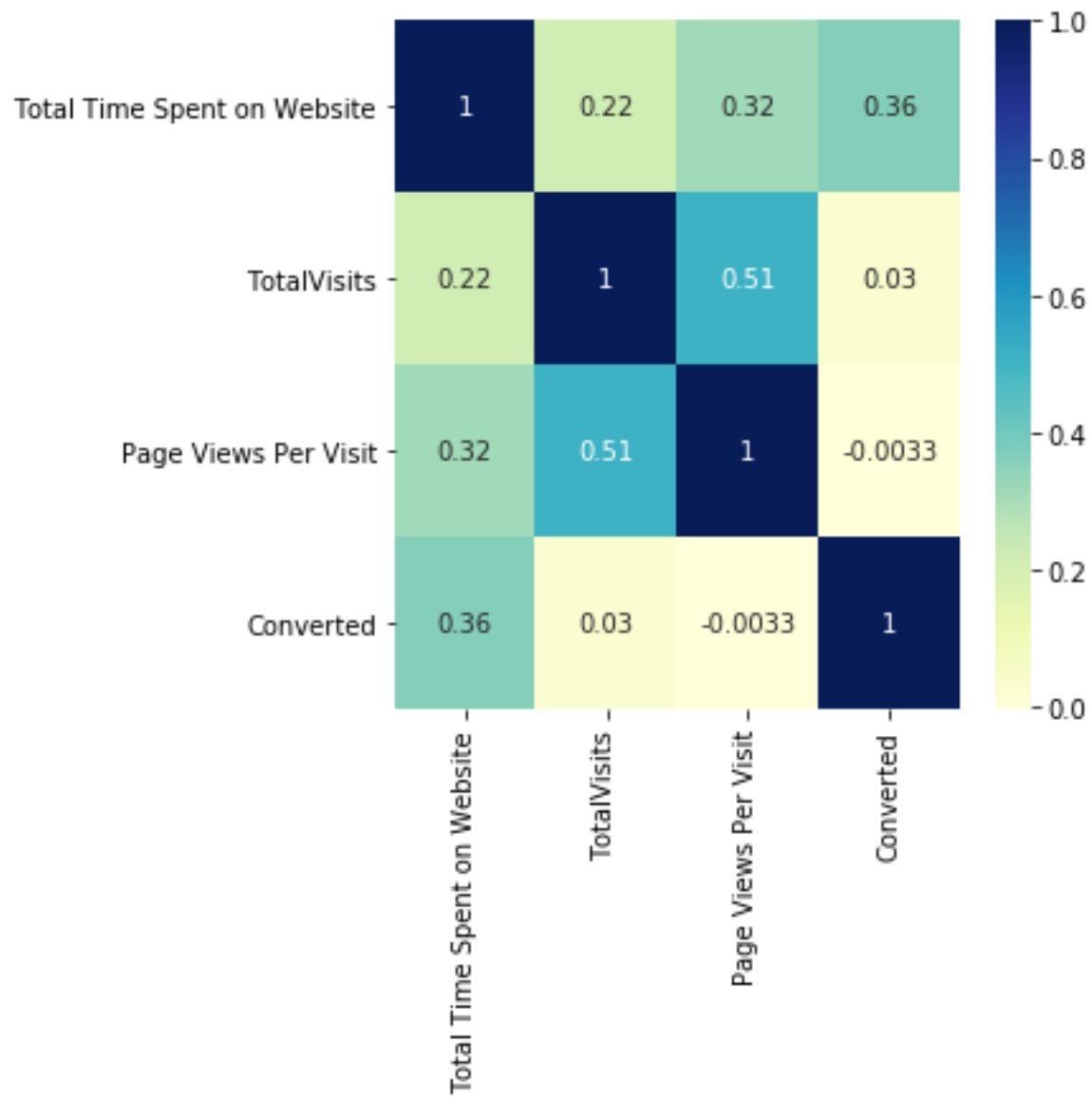
EDA plots depicting variation in categorical column (Last Activity) for those who Converted and those who didn't.



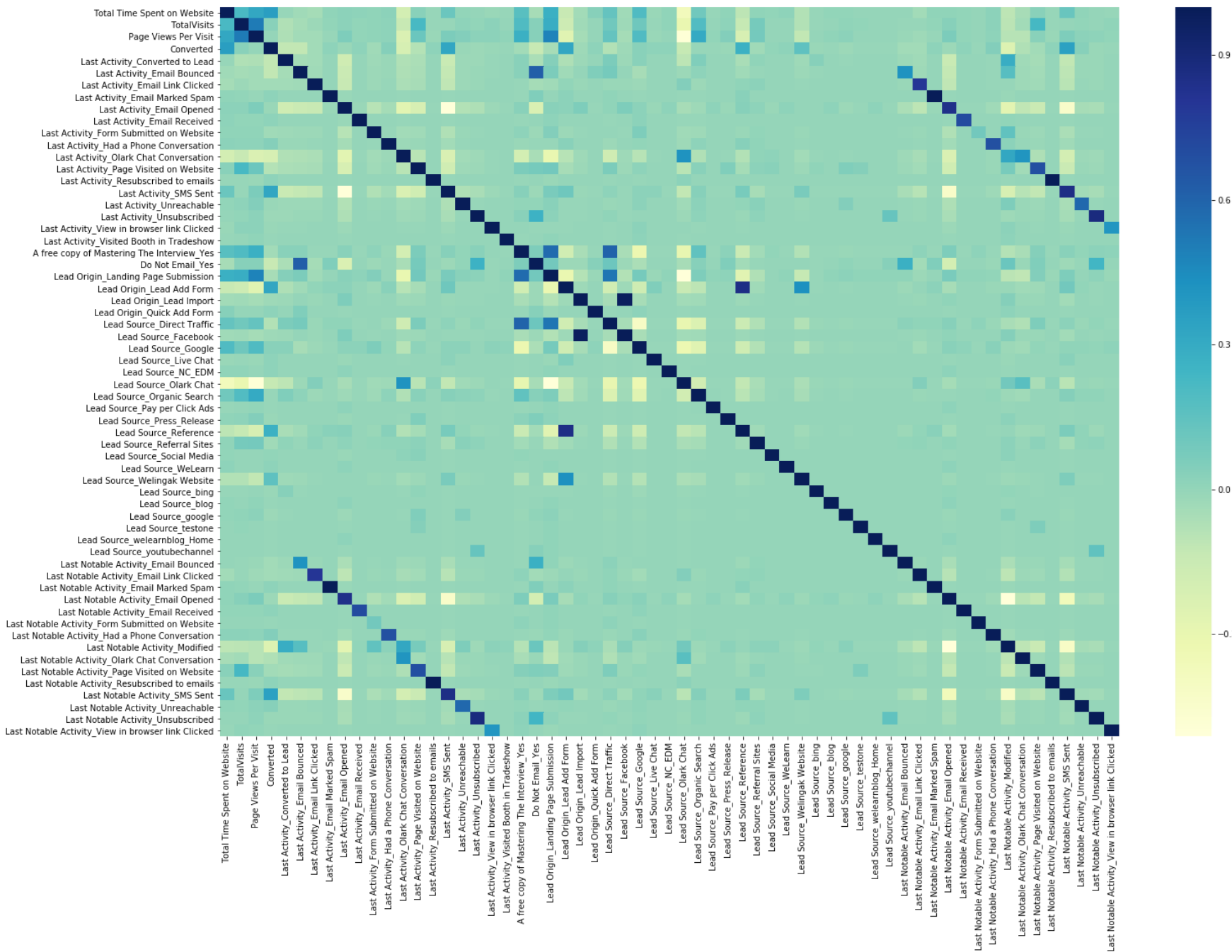
EDA plots depicting variation in categorical column (Lead Source) for those who Converted and those who didn't.



EDA plots depicting variation in categorical column (Last Notable Activity) for those who Converted and those who didn't.



EDA plots depicting correlation (Heat Map) of all selected numerical columns.



EDA plots depicting correlation (Heat Map) of all selected columns (numerical columns and dummy columns).

Conclusion 1 (LR Model)

Our Logistic Regression Model is decent and accurate enough, when compared to the model derived using PCA, with 78.6 % Accuracy on Test Set, 73.3 % Sensitivity and 82.3 % Specificity.

We can vary these parameters by varying the cut-off value and thus predict Hot leads based on scenarios like availability of extra resources and vice-versa.

Conclusion 2 (Recommendation)

X Education Company needs to focus on following key aspects to improve the overall conversion rate:

- Increase user engagement on their website since this helps in higher conversion
- Increase on sending SMS notifications since this helps in higher conversion
- Get Total visits increased by advertising etc. since this helps in higher conversion
- Improve the Olark Chat service since this is affecting the conversion negatively