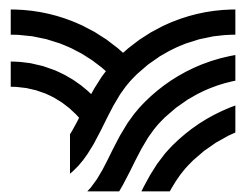# Lead Scoring
Case Study

Business Problem

An education company named X Education sells online courses to industry professionals. On any given day, many professionals who are interested in the courses land on their website and browse for courses.

The company markets its courses on several websites and search engines 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. When these people fill up a form providing their email address or phone number, they are classified to be a lead. Moreover, the company also gets leads through past referrals. Once these leads are acquired, employees from the sales team start making calls, writing emails, etc. Through this process, some of the leads get converted while most do not. The typical lead conversion rate at X education is around 30%.

Business Objective

It is expected to build a model wherein it assign a lead score to each of the leads such that the customers with a higher lead score have a higher conversion chance and the customers with a lower lead score have a lower conversion chance

A final accuracy of 80% is expected

Model Building

- The Data is cleaned to identify
  - Duplicates
  - Missing values
  - invalid values
- The Data is converted to dummy variables
- The Data is split into train and test
- Finaly the Data is scaled before the training
- Initial model is trained and matrics are evaluated
- Features are selected and refined by repeating the model building by closely observing VIF and p value
- Final model is evaluated based on sensitivity, specificity, recall and precision values
- Validate the ROC curve
- Finalizing the cut off point using accuracy, sensitivity and specificity

Data Analysis

From the proposed model , it is found that these are the features that has high correlation with result
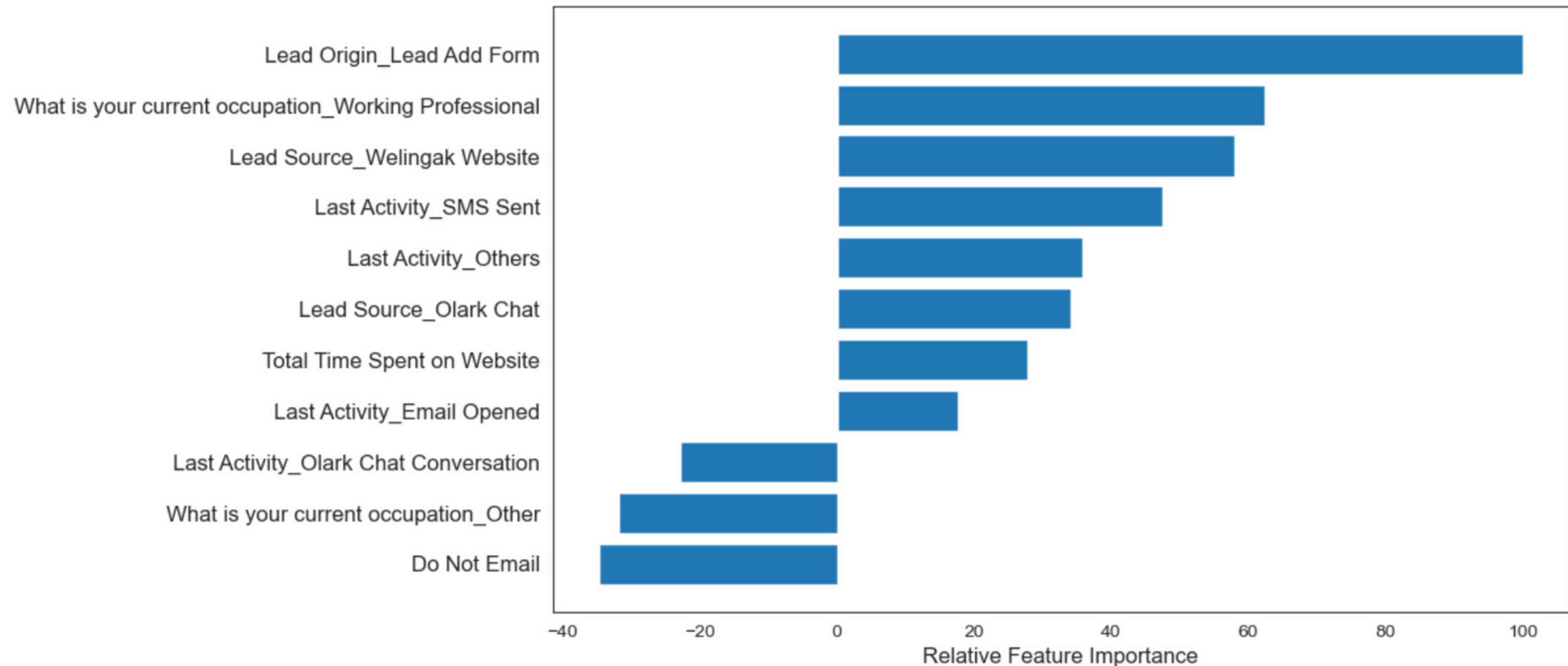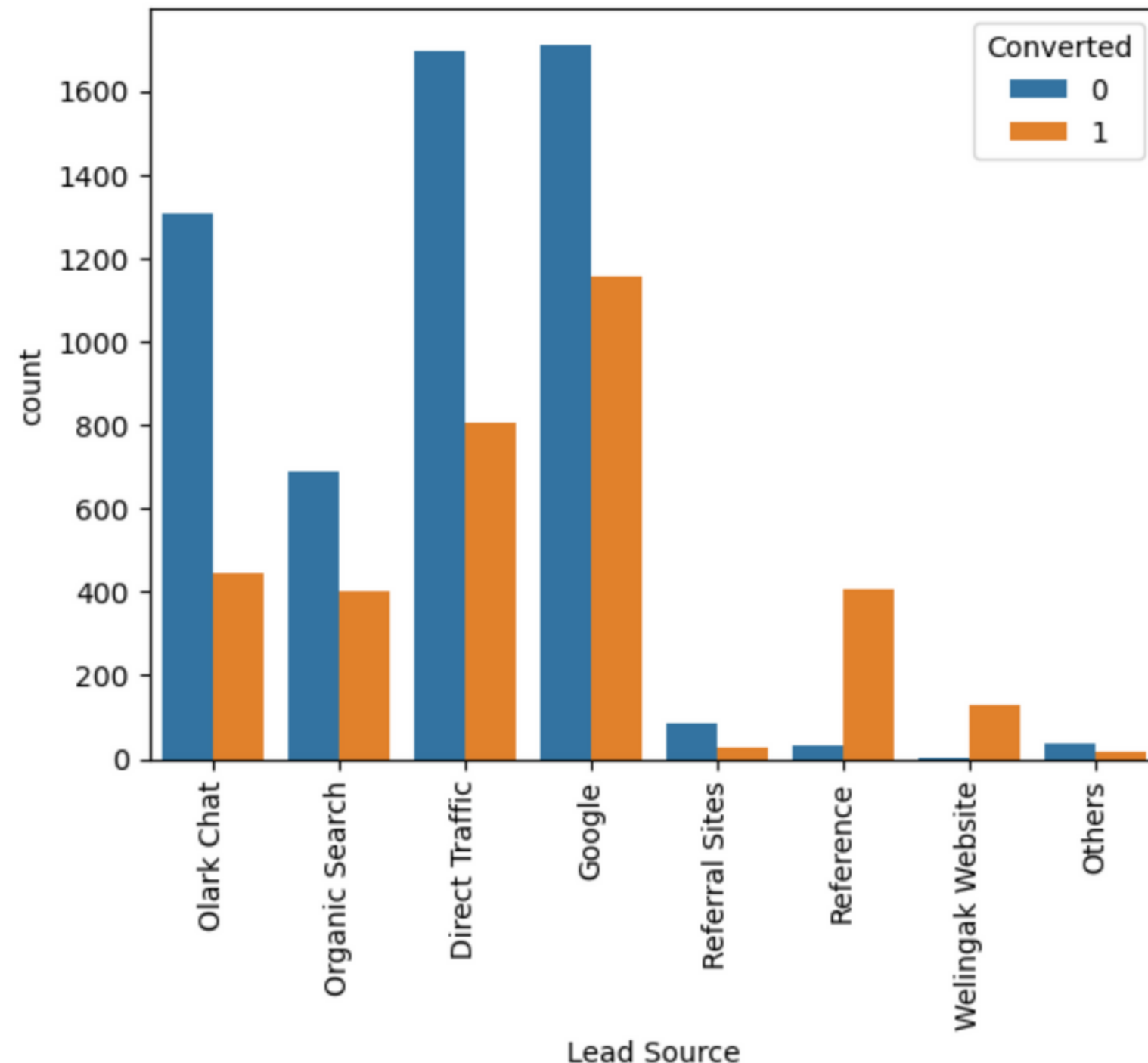
Data Analysis
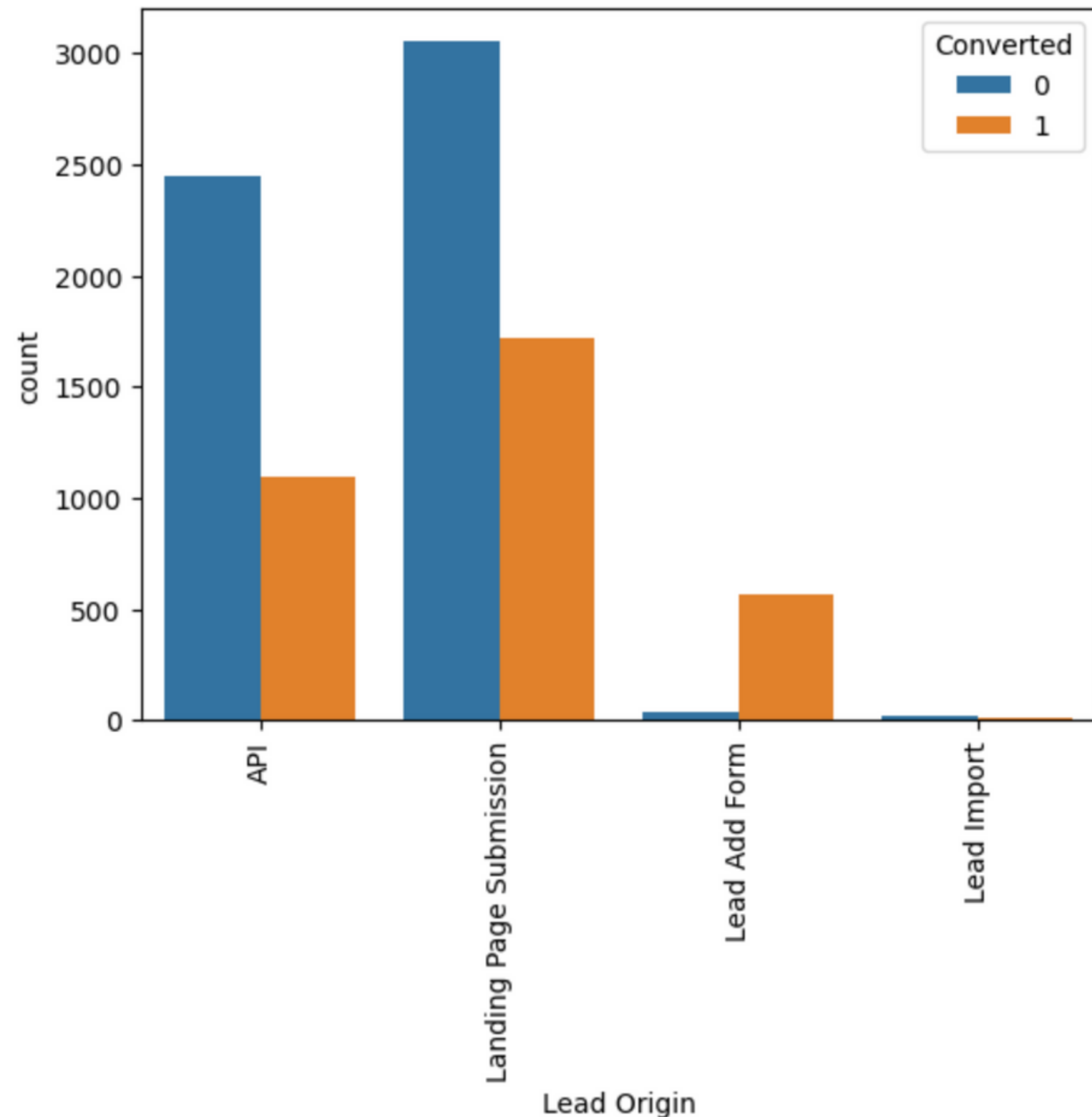
From Lead Origin it is clear,
- Add Form sign up users are seemingly more serious about their intention
- It is not sure if API stands for mobile users. But for both API and Landing page submission, 30% of people seem to be ready to convert.
- Such users need to be further evaludated

Data Analysis

From Lead Sources, it is clear that,

- Reference and Welingak Website seem to continue to the program with a high positive rate
- Google search and Organic search seem to have more than 30% sign up for the course
- Olark Chat and referral sites seem to have very low impact

Data Analysis

- People who got recently message regarding the course, shown high positive rate on signing up
- Even though not as high as sms, poeple who opened the mail also seem to be a good target for promotions
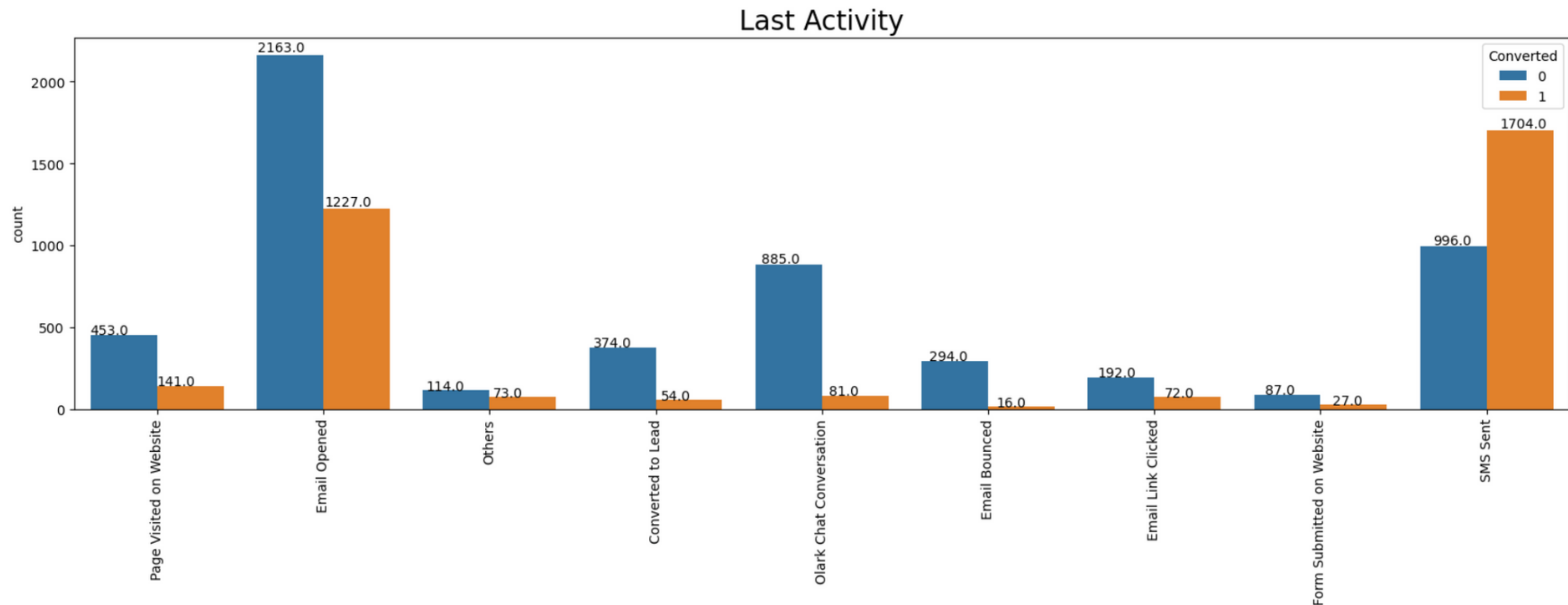
Data Analysis

- It's a better idea to market these for working professionals as reskill, since they tend to invest in it. And They have a high positive ratio of joining the course
- Also, the unemployed people tend to take the course, For future interviews. Surprisingly, the count exceeds that of working professionals, but still working professionals shows a high chance of joining

What is your current occupation
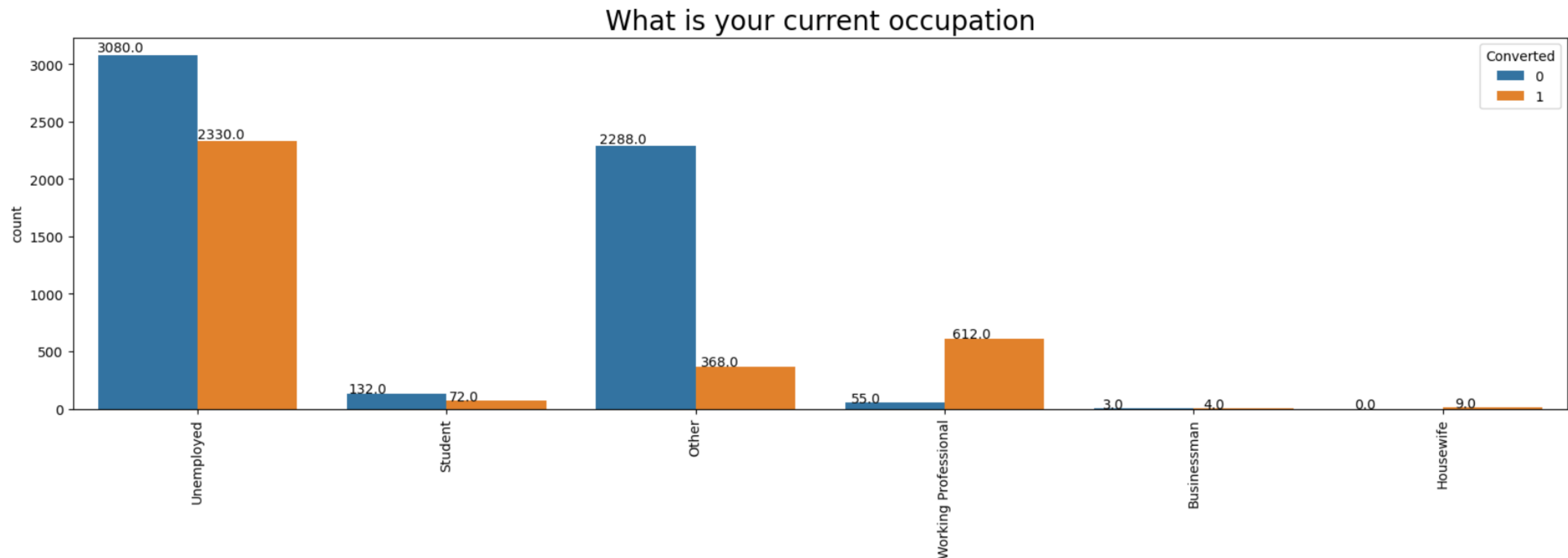
Data Analysis
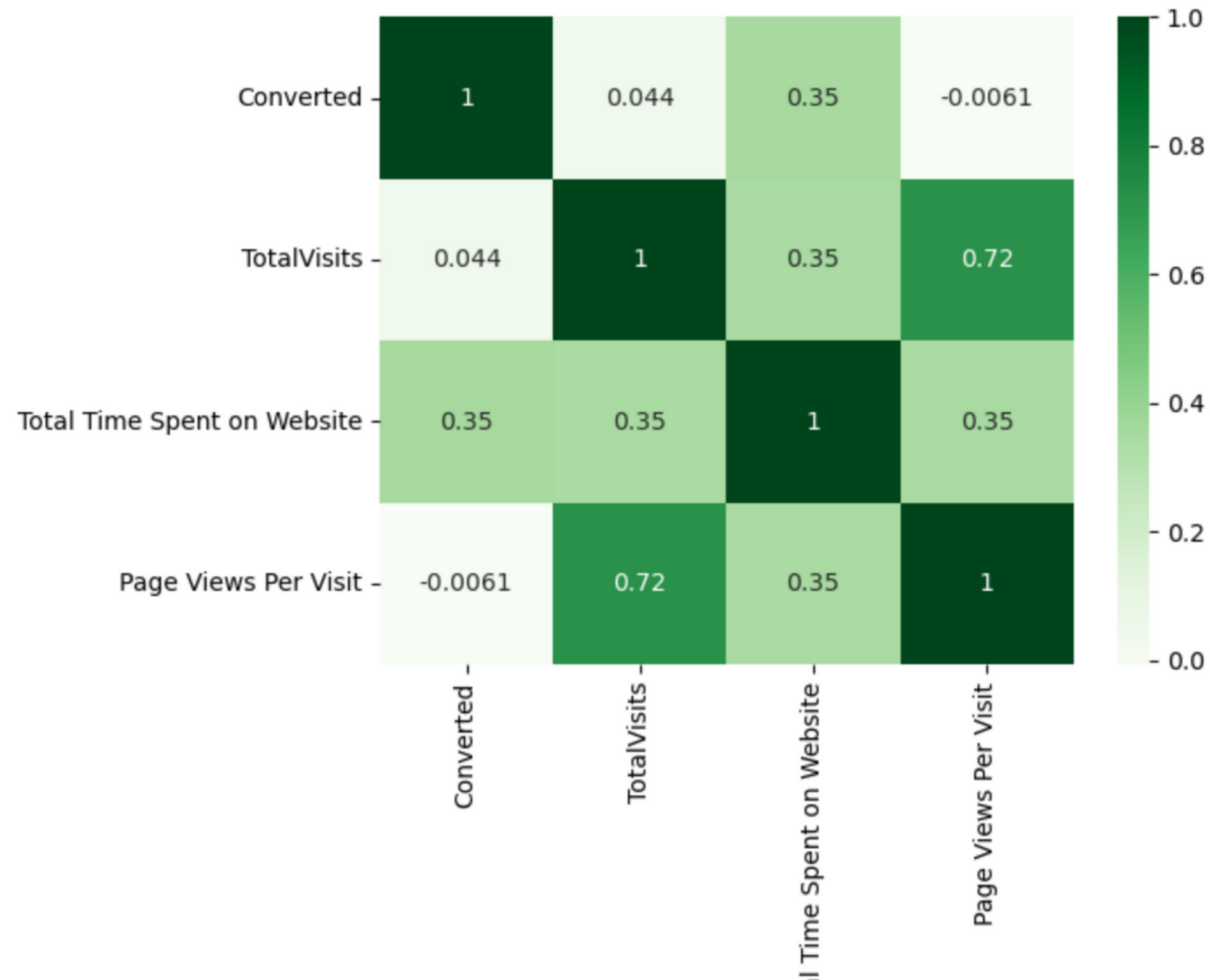
From Lead Sources, it is clear that,

- Total Visits and number of page visits don't show any correlation to the chance of onboarding a user
- But Total time spent on the website does show some impact.
- It is likely more time spend on website shows that the person doing research on the courses and highly interested in onboarding. So we can consider them as potential targets

Recommendations

- Users from Lead Add form shown a great chance of becoming a potential user
- Working professionals tend to take courses for various reasons and they can easily afford so we have a high chance of getting users among working professionals
- Though the Unemployed don't show such positive correlation as working professionals, But they also tend to take courses more
- Observe the user's activities
  - Users received recent marketing messages seem to show increased interest in taking courses. so We can polish the message communication to lure in more users
  - People who read the email also potential users.
  - People who spend more time on the website are great targets
    - They're clearly interested in what we have to offer
    - historic data shown these users tend to take courses.
    - More custom tailored offers can make their decision-making much easier
- Better to avoid people opted for do not disturbe. It's really hard to convince them to take a course and we can't deliver more content due to the dnd. avoid such users all together

Thank You!