

X Education Case Study

Identifying 'Hot Leads'

The problem

X Education

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.

Context

X Education gets a lot of leads, but its lead conversion rate is very poor.

For example, if, say, they acquire 100 leads in a day, only about 30 of them are converted.

Problem statement

The company wishes to identify the most potential 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.

Challenges deep-dive

Challenge 1

Expand leads

Select the most promising leads, i.e. the leads that are most likely to convert into paying customers.

Challenge 2

Assign lead score

Assign a lead score to each of the leads such that the customers with higher lead score have a higher conversion chance and the customers with lower lead score have a lower conversion chance.

Challenge 3

High sensitivity

Target lead conversion rate to be around 80%

Solution

ML model to assign lead score

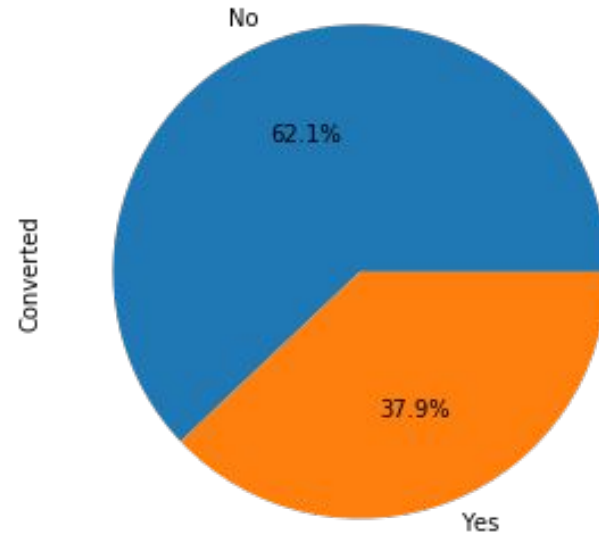
A Machine Learning based, supervised logistic regression model that predicts the probability of a lead to convert, with a high sensitivity of 83%

Implementation

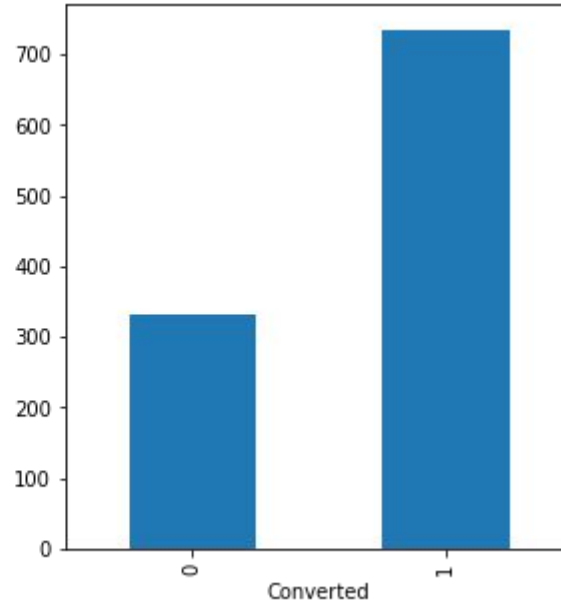
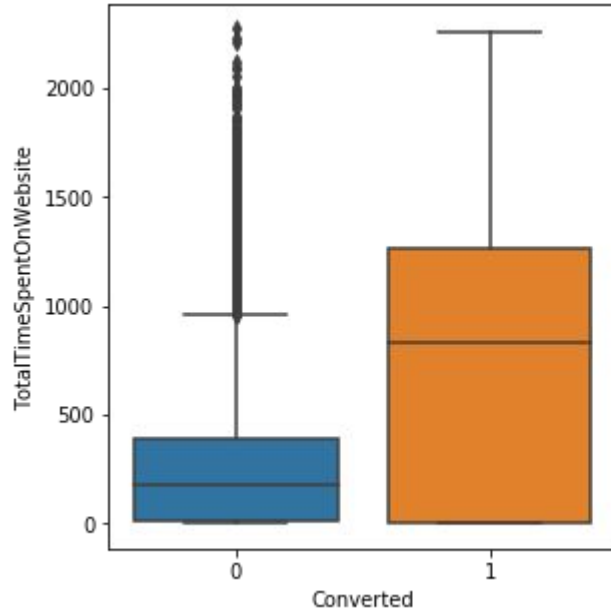
Conversion rate

As we analysed the dataset, we concluded that 37.9% of leads were successfully converted and rest 62.1% went cold. We aimed to identify the key factors that drive the lead conversion rate

Conversion percentage

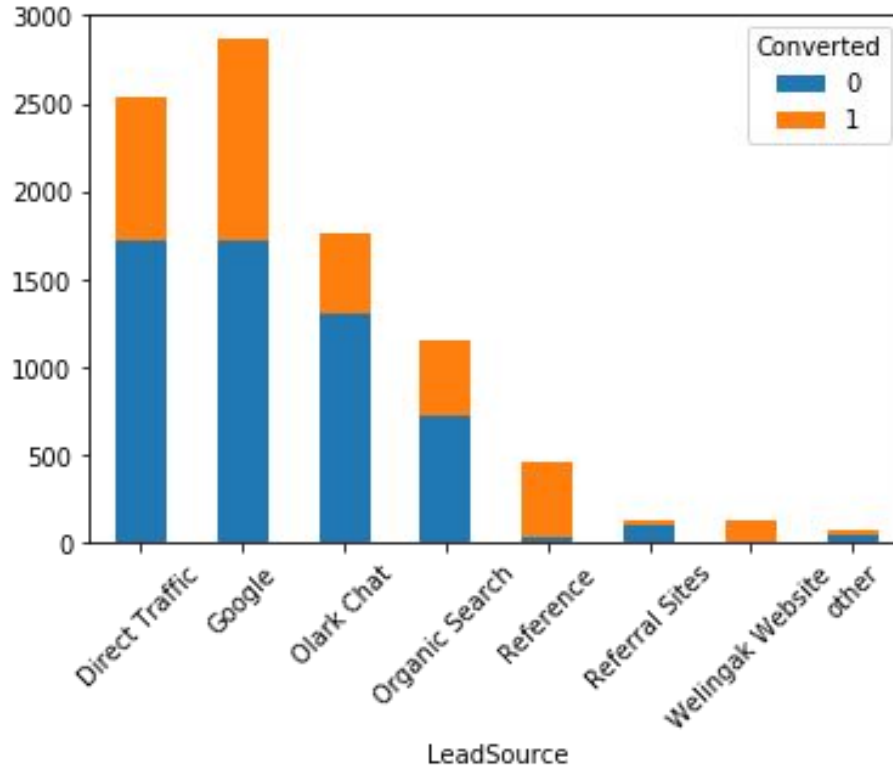


Conversion rate



We observed that leads that were converted spent significantly higher time on the website than the leads that went cold. People have been maybe looking at resources and offers by the website.

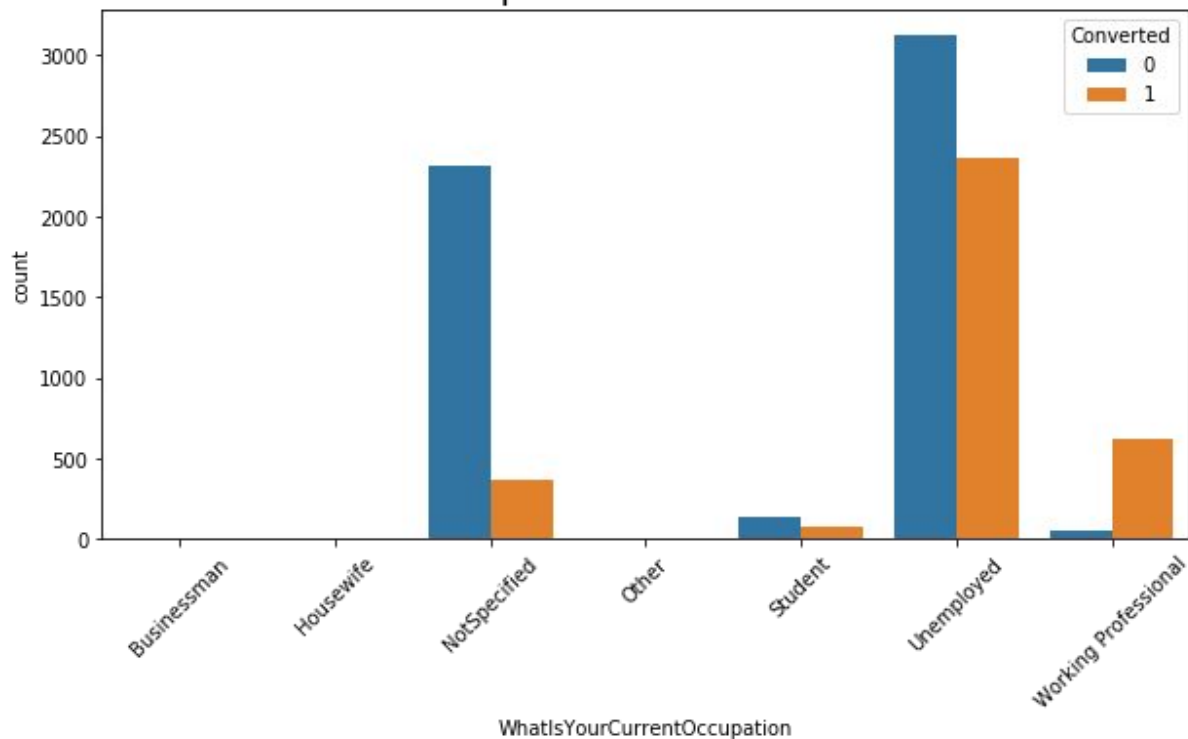
Lead sources



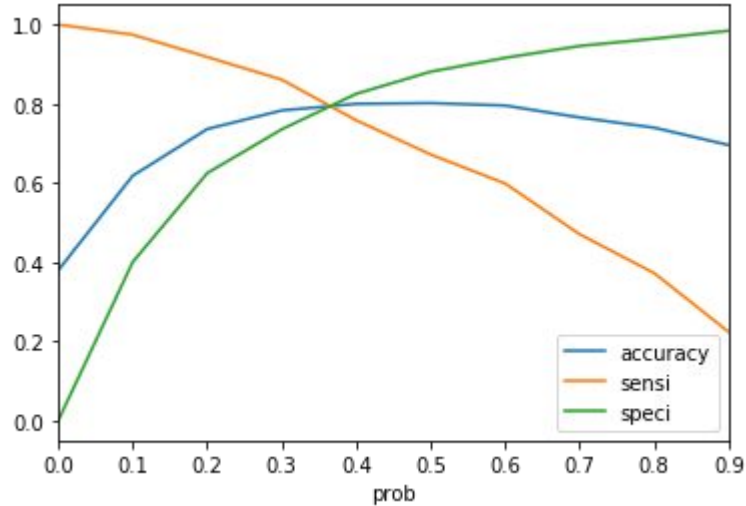
Upon further investigation, we found that maximum of leads came from Google and direct traffic. A couple other sources also include Olark chat and organic search. Google has a 40% conversion rate, while direct traffic has about 32%. Though reference and Welingak website fetched very low number of leads but have 92% and 98% conversion rate respectively.

Lead occupation

Occupation vs converted

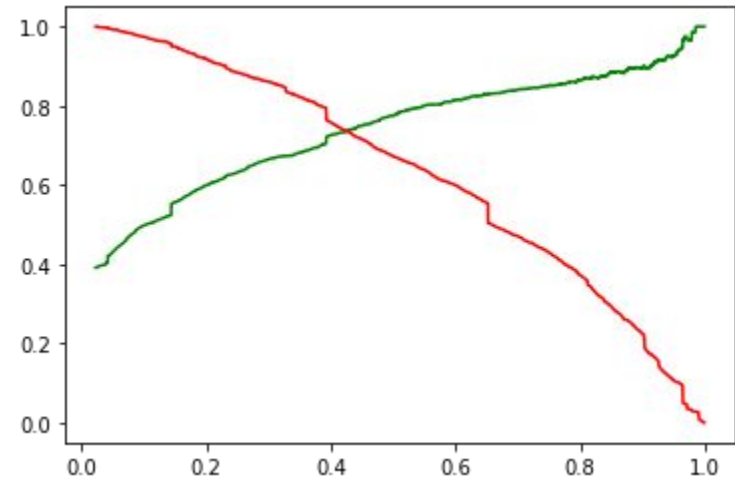


Out of all occupations, only Working Professional have positive conversion rate, approx 91% while students have a conversion rate of about 36%. Unemployed people have highest number of leads but with a conversion rate of 43%.



From accuracy, specificity and sensitivity plot, we concluded that 0.35 is optimal cut-off probability.

Precision and recall trade-off





Identified factors

Features

WhatIsYourCurrentOccupation_NotSpecified

LeadSource_Olark Chat

LastNotableActivity_Modified

TotalTimeSpentOnWebsite

LastActivity_Email Opened

LastActivity_SMS Sent

LeadSource_Reference

LastNotableActivity_Olark Chat Conversation

LeadSource_Welingak Website

LastActivity_other

Using the supervised logistic regression of machine learning, we identified that following factors are key when deciding whether are not a lead would be converted. Out of these factors, Lead Source_WelingakWebsite, LeadSource_Reference and LastActivity_SMS Sent are top 3 factors. Notably, leads with not specified current occupation, last activity modified and last activity Olark chat have a negative affect on lead conversion rate.

Recommendations

Recommendations

People coming from references and Welingak Website have highest conversion rate. However, we still loose about 8% of this traffic. Experienced marketing team can focus on this group.

People coming through google search are next in the list. (40% conversion rate). These people should be targeted with more aggressive manner as there is a probability of losing these people to competitors. These people are looking for something relevant and should be approached with solutions to their queries.

Working professionals are more inclined towards online courses, as they need flexible learning schedules and career transitions. We are losing around 8% of the traffic here. Experience marketing professionals can try to fix the leaks here or understand the reason for non-conversion.

Recommendations

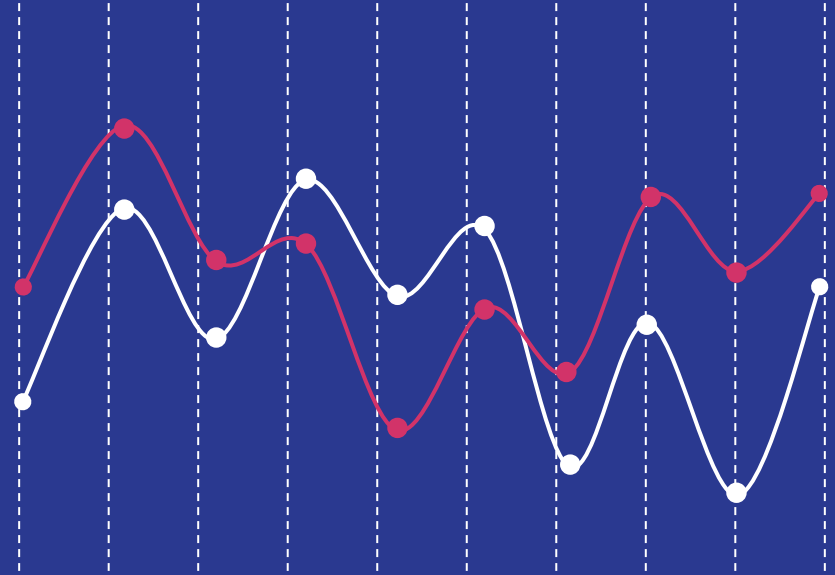
People who have been reached via SMS have high probability of conversion. However, we are still missing out on 30% of the audience. Interns can target these people via calling.

Conversion rate of around 43% for unemployed people. However, the number of leads is highest in this category. This is huge opportunity size. The only challenge with these people could be costing and financing. If the company can provide flexible payment options, placement assistance etc. this can increase conversion rate a lot and end results will lead to publicity by word of mouth and we have already seen that people coming through reference have high probability of conversion. Interns can be deployed here for repetitive follow-ups.

Mean time spent on the website by the leads that were converted was 700 units. Among the unconverted leads 15% of the people spent above average time on the website. These can be a good target audience for interns to work on and get them converted. Feedback from these people will also help in improving website/content.

Impact

- Accurate lead scoring
- Higher lead conversion



The team

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