## Summary

In this case study for X Education, a comprehensive lead scoring model was developed to predict the likelihood of a lead converting into a paying customer. The primary goal was to enhance the efficiency of the sales process by identifying high-potential leads, thereby enabling the sales team to prioritize their efforts effectively.

The model was constructed using logistic regression, with a focus on a variety of demographic and behavioural variables. Among the variables considered, the total time spent on the website, the number of total visits, and the consistent engagement of leads emerged as the top predictors of conversion. Additionally, categorical variables such as the lead's profession (with working professionals showing a higher conversion probability), the source of the lead, and the preferred communication channel were identified as crucial factors.

## **Key Findings**

- Variables that significantly impact lead conversion include Total Time Spent on Website, Total Visits, and Page Views Per Visit.
- Lead Origin, Lead Source, and Last Activity are also important factors.
- Leads with a score of 36 or higher have a high likelihood of conversion, with conversion rates of 87% and above.

The model's performance was evaluated using metrics like accuracy, precision, recall, and specificity, indicating a robust predictive capability. Insights from the model suggest that during periods of increased sales capacity, such as when interns are available, an aggressive strategy by lowering cutoff would be most effective. Conversely, in periods where the company has already met its sales targets, a more conservative approach focusing only on the highest probability leads would minimize unnecessary outreach efforts.

The model provides a reliable scoring system that can help X Education focus on leads with a high probability of conversion, thereby improving their overall efficiency and conversion rate.