## Summary

X Education, which sells online courses to industry professionals via websites and search engines, faces a challenge of high lead acquisition but a low conversion rate (~30%). Their goal is to identify "Hot Leads" to improve efficiency and increase their conversion rate to 80%. They plan to do this by developing a model to assign lead scores. Analysis of current data shows that leads from 'API' and 'Landing Page Submission' have lower conversion rates, while leads from 'Google', 'Olark Chat', 'Organic Search', 'Direct Traffic', 'Reference', and 'Welingak Website' show higher conversion rates. The logistic regression model used predicts conversion probabilities, with an optimal cut-off of 0.27 to classify hot leads. It includes features such as email preferences, lead origin, source, last activity, tags, and lead quality. The model has a sensitivity of 0.937 and precision of 0.667. Recommendations include focusing on increasing conversion rates for key lead sources and origins, enhancing website engagement, and targeting high-potential activities and user segments like working professionals. The overall strategy aims to enhance lead conversion rates and achieve the target goals effectively.