

## Summary report

X Education, a provider of online courses to industry professionals, faces a challenge with low conversion rates, typically around 30 out of 100 leads per day. The company's primary objective is to enhance efficiency by identifying and prioritizing "Hot Leads," which are leads most likely to convert. This focus is crucial as it allows the sales team to concentrate their efforts on the most promising prospects, thereby potentially increasing the overall conversion rate.

To address this, X Education I used a methodological approach that includes cleaning up data by removing duplicates, managing missing values, and addressing outliers. This process ensures that the data is clean and reliable for analysis. I used logistic regression for building predictive models, aiming to identify key variables that influence lead conversions.

The analysis has identified three critical variables that significantly affect lead conversion rates: "Tags\_Closed" by "Horizzon, Tags\_Lost to EINS", and "Tags\_Will revert after reading the email". These tags indicate the leads' engagement level and intent, serving as strong predictors of potential conversion.

During periods when X Education employs interns, the strategy shifts to aggressively converting high-potential leads. This involves using targeted communication strategies, such as prioritizing high-probability leads as identified by the predictive model, and enhancing intern training on effective communication and CRM tools. Real-time monitoring of outcomes and adjusting strategies promptly are also emphasized to maximize the effectiveness of the sales team.

Conversely, when the company achieves its quarterly targets ahead of time, the focus shifts towards minimizing unnecessary outreach to preserve resources and avoid overexertion. The strategy during these periods includes refining lead scoring to only engage with the most promising leads and increasing reliance on digital communications like emails and SMS. Automation is used for initial engagements, and continuous optimization through real-time data monitoring and CRM tools is implemented to adapt strategies effectively.

These strategic approaches are designed to maintain efficiency and maximize lead conversion without expending unnecessary resources, aligning with the company's goals of improving conversion rates and managing communication efforts effectively.

With this case study, it made it clear to me that business and data science are deeply interconnected in the context of optimizing operations and decision-making within a company like X Education. I leant bout data-driven decision making, the importance of cleaning data and predictive modeling.