Case Study
Predictive Modelling

webalytix

Model likely bookers and compare to the responders from a direct mail campaign

Reduce costs by not mailing to unprofitable deciles

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Challenge

A top UK theatre organisation thought they were spending too much to communicate with customers. Brochures were being sent to all customers to encourage further bookings.

They considered that they may be sending brochures to customers who'd book anyway and to customers with no chance of booking. They couldn't identify these groups to check their responses, so Webalytix came in to assist.

Solution

We used the theatre's history of transactional data to create a host of variables for each customer. These were then modelled to combine into a probability of how likely they were to make a booking.

We analysed the last 2 years of data to create variables including number of transactions, average, minimum, median, mean and max transaction value, tickets per transaction, value per ticket, distance they live from their nearest venue, etc.

This was run through a linear regression model which showed a 60% uplift when compared to a random selection. We split all customers into the model decile they fell into and deployed across test and control groups for the brochure.

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3 Results

180%

Model Performance
The top decile of the model provided 28% of the total bookers

Campaign Uplift
All model deciles showed an uplift in response rate between the test and control groups. However, the organic booking behaviour of control group customers in the top model decile was incredibly strong, so this group of customers delivered a loss in sales vs. control.

Potential Revenue Uplift
If the theatre didn't send brochures to its top decile of customers, uplift in revenue per mailing sent would increase from £0.33 to £0.66

202%

Bottom Deciles
Customers in the bottom deciles had strong uplifts in sales if they received the brochure, compared to if they didn't. Therefore the theatre should continue to contact these customers

4 Next Steps
The theatre will now stop sending so many brochures to customers who are already likely to book!

We'll do more investigation into why organic sales from the top decile were so much stronger when the brochure gave an uplift in customer numbers.

It may be that the control group were also receiving newsletter and solus emails promoting the same events, which would be a much cheaper way to convert sales.

A new model will be created for their next brochure in which we'll attempt to predict the likely uplift from sending the customer a brochure instead of just their likelihood to book.