intelliarts

Case Study

ML-powered solution to improve lead quality and agent efficiency

Business challenge:

Our customer (under NDA) is one of the fastest-growing health tech insurers. The company specializes in selling Medicare-eligible insurance coverage by working as an insurance broker. They're a big supporter of disruptive innovation and always seek ways to improve business operations.

The insurer has contacted us to improve sales effectiveness, and after a series of the first meetings with the customer, we came to an agreement that the best way for them to convert leads into sales will be through:

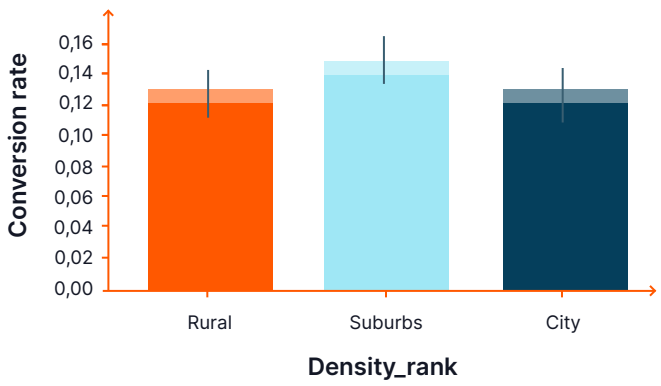
- Improving lead quality
- Increasing insurance agent efficiency

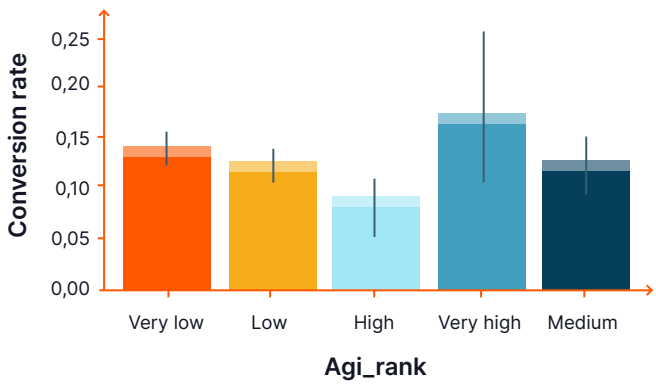
Solution:

To meet these demands, the Intelliarts team has built the ML-powered solution composed of two parts. The solution aimed at helping the customer detect regions with the most promising leads (1) while also assigning them to high-performing insurance agents (2) to raise the chance of a successful sale.

Here is how the solution was built step by step:

- First, we conducted sales data analysis at a zip code level. The Intelliarts team tried to find a pattern between the demographic and financial data and sales data provided by the customer. The goal was to predict the average profit in the regions to choose those where sales would be the most profitable.
- However, the preliminary research proved that the team didn't have enough sales data for quality analysis at the zip code level. So, we moved to the data analysis based on a destination sectional center facility (SCF). As a result, we've gotten two key insights into the lead quality: the conversion rate was a bit bigger in sub-urban areas (1); there was no linear dependency between AGI (Adjusted Gross Income) and conversion rate (2).





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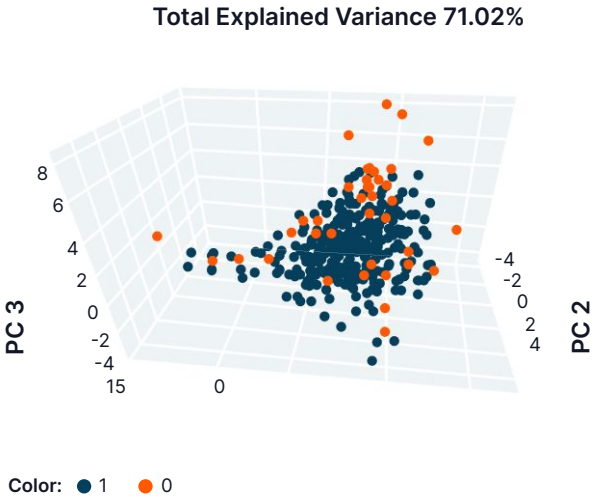
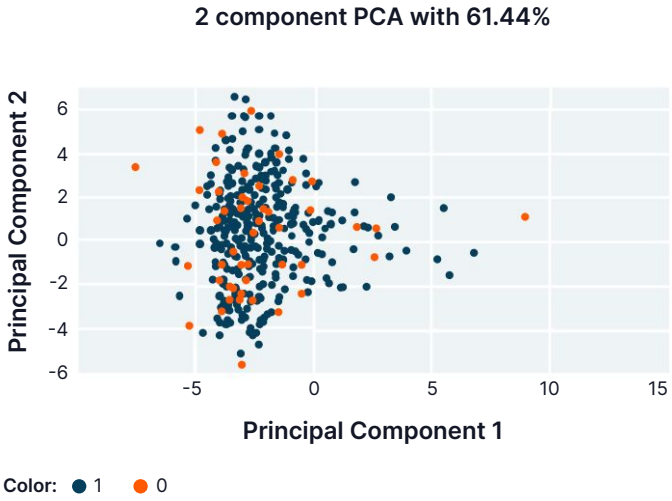
- To detect SCF codes with high conversion, our data engineers labeled SCF as high- and low-performing based on conversion and built a PCA visualization. We then built the ML classification model using decision tree and clustering analysis techniques, which should help the customer choose the most profitable SCF regions for lead selection.





- To increase the efficiency of insurance agents, we built an algorithm that could detect agent efficiency and connect the top-performing agents with the most promising leads.
- Based on the collected data about agent calls, we created a statistical model that predicted an agent conversion rate per week and contrasted it with the actual conversion rate. According to the results, the agent could be promoted to a higher tier and, thus, receive more quality leads and earn more. This motivated agents to work better and increase the chance of a successful sale.

Business value

The ML-powered solution we've built helped the customer establish a better lead selection strategy. Now the insurtech company spends much less time on SCF with possibly low conversion and focuses most sales efforts on those high-performing ones. Respectively, the lead quality has already increased by 5%.

Also, agent efficiency has grown by 3% because agents are more motivated to work to be able to earn more. Altogether, these changes have improved overall conversion rates and maximized company profitability.

Read more: Case Study on Improving Insurance Lead Quality and Agent Efficiency