Making Sense

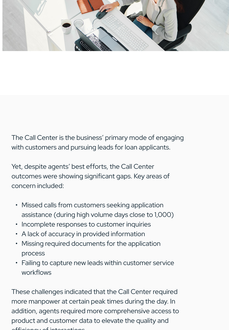
Revving Up a Call Center Outcomes Via Data Insights

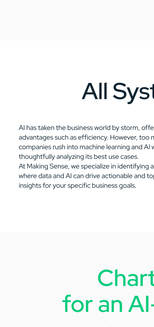
Overview

A top provider of car loan refinancing in the U.S. was experiencing missed opportunities in their Call Center.

With a 80% loan application churn rate and a 10% missed call rate, it was clear that Call Center efforts could benefit from an optimization strategy.

Our Making Sense team collaborated closely with the Call Center to create an AI-powered data pipeline that could generate key insights to make operations more efficient and ultimately boost customer conversion rates.





Looking Under the Hood of the Call Center

The Call Center is the business' primary mode of engaging with customers and pursuing leads for loan applicants.

Yet, despite agents' best efforts, the Call Center outcomes were showing significant gaps. Key areas of concern included:

- Missed calls from customers seeking application assistance (during high volume days close to 1,000)
- Incomplete responses to customer inquiries
- A lack of accuracy in provided information
- Missing required documents for the application process
- Failing to capture new leads within customer service workflows

These challenges indicated that the Call Center required more manpower at certain peak times during the day. In addition, agents required more comprehensive access to product and customer data to elevate the quality and efficiency of interactions.

Fortunately, AI offered a potential roadmap to assess the information we needed and implement high-impact improvements.

All Systems Go for AI

AI has taken the business world by storm, offering key advantages such as efficiency. However, too many companies rush into machine learning and AI without thoughtfully analyzing its best use cases. At Making Sense, we specialize in identifying areas where data and AI can drive actionable and top-value insights for your specific business goals.

For this project, we saw a clear need to glean data to make informed decisions about Call Center operations. In customizing machine learning model data pipeline, our goal was to bring together key points to maximize Call Center efforts and increase overall ROI.

Charting a Course for an AI-Driven Solution

Our vision was to harness key business insights by leveraging data science and machine learning best practices.

Key Features

- Identify friction points in the loan refinancing process
- Define valuable and unanswered business questions
- Develop hypotheses on the reasons behind the churn rate
- Determine opportunities for process and resource optimization

Action Items

Call Center Optimization

- Identify the best use of agent efforts
- Calculate the best times when and how many agents should be present to take calls
- Understand reasons behind missed calls and why customers don't attend calls
- Grant access to better knowledge that agents can share to improve campaigns
- Identify other opportunities for improvement in Call Center workflows
- Add value for decision-makers on an ongoing basis

Data Solution Setup

- Establish long-term business goals
- Identify outliers related to data quality and make necessary corrections
- Deliver a report with insights to trigger data-driven business decisions
- Provide a scalable solution that can be adapted regularly to provide up-to-date business information

Strategic Steps

1 Ideation and Understanding

We hit the ground running to identify and prioritize objectives and KPIs. Our main aim was to ensure alignment with real business needs. During this ideation process, we also addressed concerns regarding secure data access, while understanding the priorities and needs for the next phases.

2 Get Access to Secure Data

Once we prioritized business objectives and KPIs, we needed to dig into the data, including where it was hosted, how to securely access it and which data streams were relevant to the case.

3 Come Up With Hypotheses to Validate

From here, we worked with internal Call Center specialists to consider business questions aligned with their key objectives. We discovered 16 hypotheses and questions, which we then ranked according to their individual cost-benefit ratio. As a result, we prioritized five hypotheses for further evaluation.

4 Complete Real Data Analysis

Next, we used industry-leading practices in data science to evaluate the hypotheses. In our analysis, we identified patterns of behavior and adjusted the data as needed. We also identified inconsistencies and outliers to avoid reaching incorrect conclusions.

5 Create Data Pipeline

We constructed data pipelines to make our process reproducible on an ongoing basis. With a customized pipeline, we could observe and manipulate the data in a consistent manner. This helped in reproducing the steps that get us valuable insights, while allowing corrections to flow back into new insights.

6 Create Data Validation Models

We created a few models that we used for validations of our hypotheses. These models analyzed and predicted behaviors on a subset of the data, which we validated with the remaining data that the models had not yet seen — ensuring that our models are really generalizing to the whole of the data. The insights on these models are now business insights: the generalities that these models predict are key indicators of the observed behavior, whether it is to improve current practices or to gain knowledge about hidden parts of the call center process.

7 Set Up Ongoing Reports

Finally, we harnessed these data-driven insights for our main business questions. While some had one-shot answers, others were best captured through ongoing reporting. To this end, we set up a smart report to give this company easy access to information collected by their data pipeline. This became a key element of their company's ecosystem to check assumptions periodically and incorporate high-impact data into their decision-making processes.

Our Tech Stack Decision

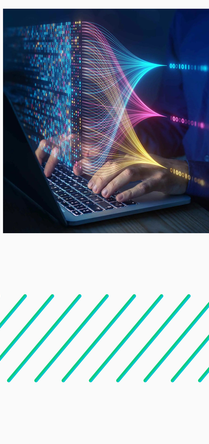
Metabase · NumPy · pandas · learn

Fueling Insights to Boost Call Center Operations and Outcomes

This project demonstrates how, starting from business objectives and KPIs, we can integrate data science and machine learning to transform operational efficiency. In turn, this can generate a significant impact on business outcomes.

By focusing on converting data into actionable insights, the company will now be able to improve decision-making and maximize its return on investment.

Ultimately, technology is a means to an end. For your business, AI should be a feature, not the product.



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