

Revving up a call center outcomes via data insights

25%

reduction in missed calls

30%

faster response times

20%

increase in loan application completion

About Auto Approve

Auto Approve is a leading provider of auto loan refinancing in the United States. Its innovative platform helps clients secure lower interest rates and boost their economic well-being by restructuring their vehicle loans.

With a strong industry presence, the company has helped thousands optimize their budgets with accessible, tailored loan solutions.

However, it faced missed opportunities within its Call Center, reflected in an 80% dropout rate for loan applications and 10% of calls going unanswered. These inefficiencies pointed to the need for an optimization strategy aimed at enhancing operations and increasing customer conversions.



Looking under the hood of the call center

The Call Center is the company's primary channel for connecting with clients and generating financing leads. However, operational inefficiencies hindered the team's ability to reach its full potential. Key challenges included:

- **High volume of unanswered inquiries** – On peak days, nearly 1,000 calls related to applications went unaddressed.
- **Incomplete interactions** – Agents struggled to provide clear, complete answers to borrowers.
- **Inaccurate information** – Errors led to confusion and a poor customer experience.
- **Missing documents** – Many applications were delayed due to incomplete paperwork.
- **Lost opportunities** – The lack of an efficient workflow resulted in valuable leads being missed.

These challenges underscored the need for more staff during peak hours and better access to product details and customer records to enhance service quality and efficiency.



The Making Sense approach

Our team at Making Sense collaborated closely with Auto Approve's Call Center to develop an AI-powered data infrastructure that generates key insights. This system streamlined operations, enhanced decision-making, and significantly increased conversion rates by addressing the identified inefficiencies.

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

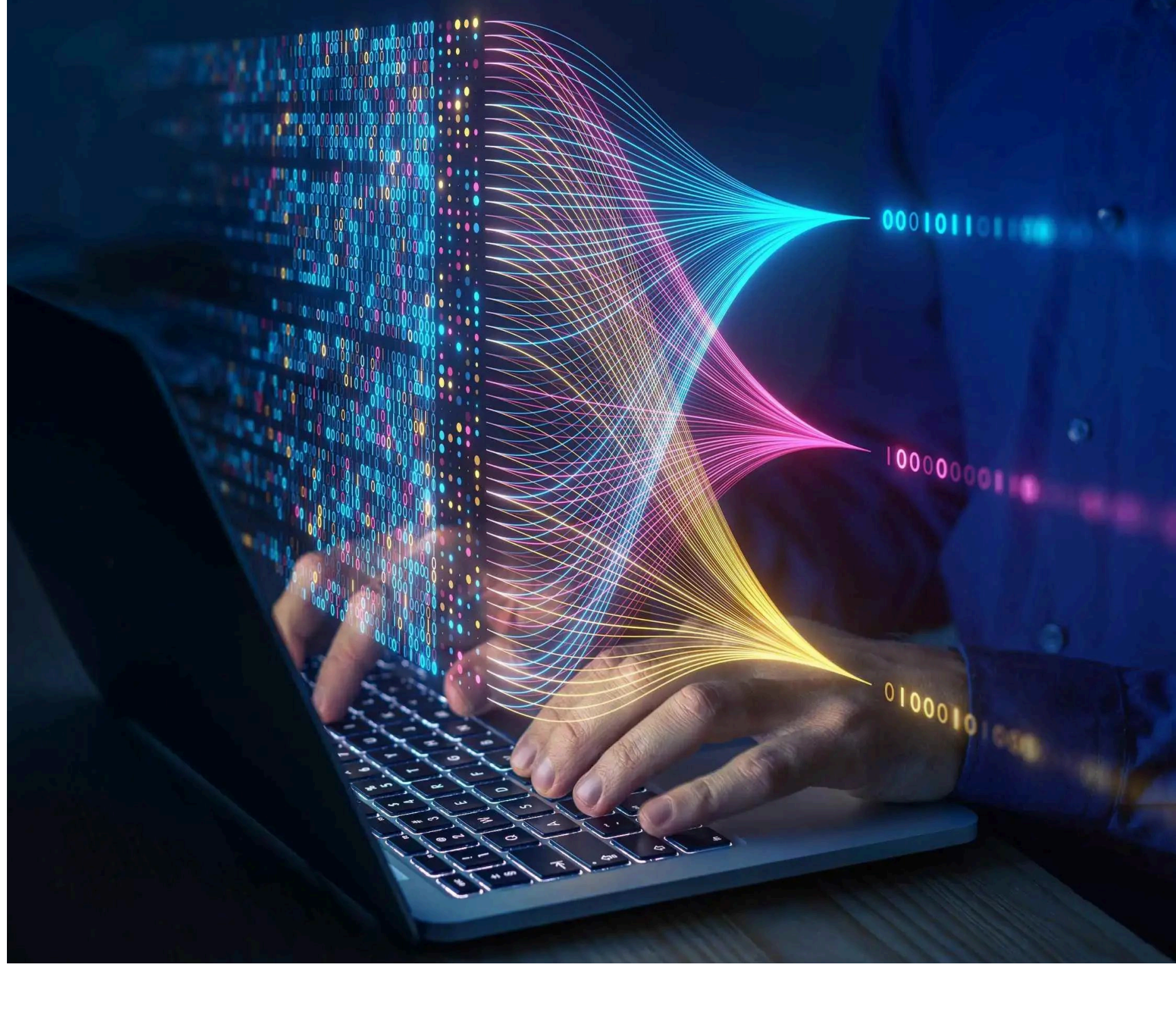
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Impact & business outcomes

Making Sense drove a transformative improvement in operational efficiency by leveraging data science and machine learning. Its AI-powered solution provided actionable insights, aligning with key business objectives and KPIs, that enabled Auto Approve to optimize Call Center operations, enhance decision-making, and drive better business outcomes.

Key insights uncovered through machine learning:

- The technology uncovered that calls not only extended far beyond the average duration—lasting over three hours—but also failed to generate any qualified leads, resulting in suboptimal resource allocation.
- Many uninterested customers hung up within the first 10 seconds, allowing Auto Approve to refine its lead qualification process and focus on better-targeted prospects.
- Agents lacked access to real-time data, which caused delays in responding to customer inquiries. The implementation of a centralized data pipeline significantly improved response times and accuracy.
- Document collection bottlenecks were addressed by introducing automated document requests, streamlining the application process.



The focus on data-driven insights allowed the company to:

- Reduce missed calls by 15-25% and improve response times by 20-30%.
- Increase loan application completion rates by 15-20%, directly impacting revenue.
- Enhance customer experience scores by 10-15%, improving retention and satisfaction.
- Improve call handling efficiency, reducing time spent on unqualified leads and optimizing agent workflows.

Why Making Sense?

Making Sense stands out as a strategic technology partner, not just a service provider. With a deep understanding of how technology drives business success, the company specializes in aligning digital solutions with real-world business objectives. Its expertise in software development, UX, cloud, AI, and automation enables organizations to modernize, scale, and innovate effectively.

What sets Making Sense apart is its approach: a blend of technical excellence, strategic insight, and a commitment to long-term partnerships. By integrating agile methodologies with a nearshoring model tailored for efficiency and collaboration, Making Sense helps businesses turn complex challenges into scalable, high-impact solutions.

Transforming ideas into scalable solutions—ready to start?

Let's connect and make it happen.