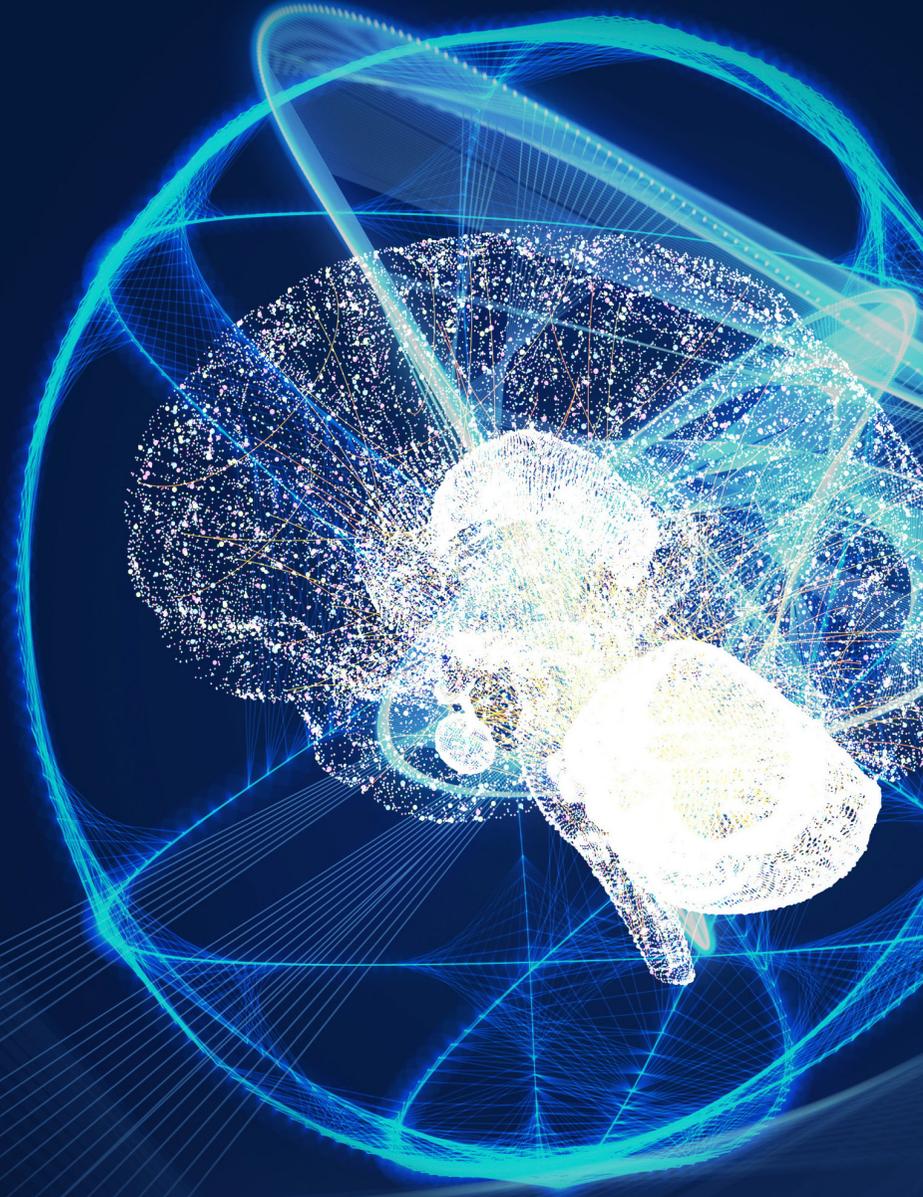




EBOOK

# AI in Customer Analytics: Tapping Your Data for Success





**Customization. Communication. Clarification.** When it comes to connecting with customers, AI offers companies more ways to act on the data that they have collected than at any other time in history. But this doesn't always mean that the data is used effectively and efficiently. Many companies find themselves data rich, but optimization poor – meaning they know how to collect the data but not how to use it most effectively to deliver better service, products, and value. Increasingly, companies need to have a real-time understanding of customer needs and offer real-time strategies to maximize the value of their data streams. They need the insights to take into account the real-world complexities and patterns of the data and how it reflects human behavior beyond the limitations of traditional business intelligence.



At the same time, companies seem to understand the importance of AI-driven decision-making. In fact, “four out of five global data and analytics decision makers say that their firms want to become more data-driven and perform more advanced predictive analytics and artificial intelligence projects. Yet most enterprises struggle to capture the full value from data science initiatives on a regular basis.” (Forrester® [Best Practices: Scaling Data Science Across The Enterprise](#). 2018).

How do organizations go about realizing this full value? It starts with alignment. Because every industry and every customer is affected by AI-driven decisions, it’s very important to have agreement across your organization on what outcomes they are looking for from their AI projects. Stakeholders, business leaders, and data science teams need to understand what questions they want to answer, where to look for the answers, how to define the best use cases, and how to plan ahead in order to streamline the entire process.

All of this is no small feat. Most AI projects encounter some kind of bottlenecks in their processes. Working to move from experimental AI to production-level, trustworthy, and ROI-driven AI means aligning data scientists, business analysts, and domain experts – and often means looking for overlapping expertise in these groups.

Here, we will take a look at all the ways that understanding customer analytics helps organizations from all kinds of industries understand their customers better from retail to healthcare to entertainment.



## How does customer analytics transform organizations?

The number of questions that can be answered through understanding your customers is nearly limitless. Companies strive to come up with a better strategy to reach customers, understand what products are relevant to them, determine store formats and site locations, set prices, and much more. A deep dive into customer analytics is the catalyst that companies need to develop meaningful products, choose the right locations, and keep their marketing outreach relevant.



**Some of the applications where AI-driven organizations see huge rewards when they augment customer analytics with AI include:**

- ✓ **Reaching the empowered consumer.** The empowered consumer is connected and informed – ready to research companies and the products they want at the click of a button. Connecting with them effectively is about anticipating their next move. This includes predicting customer satisfaction, predicting when their next purchase will be, setting promotional pricing, and predicting when items will be out of stock.
- ✓ **Determining product assortment and supply.** When new products enter the market, one of the most important factors in success is determining the optimal price. Prices that are too high or too low can sink a company's bottom line. And running out of stock is a scenario any company wants to avoid. With AI-driven demand forecasting, companies can ensure that they hit the mark on pricing and market demand, as well as having the optimal assortment of product supply.



## HOW DOES AI HELP THE DATA SCIENTIST?

Data scientists typically come equipped with skills in three key areas: mathematics and statistics; data science methods; and domain expertise. While some people have strengths in all three areas, finding those people is like finding a unicorn. Generally speaking, most data scientists are strong in one or two of these areas, but not all three. Even if data scientists have worked with a particular type of customer data before, their domain expertise does not always translate into actionable insights for your business. This is where AI can truly help to bridge the gaps in your team.

Automation is mostly about efficiency. With the sheer amount of data available to most customer-facing organizations, automation can help speed things up exponentially. In traditional data science, it takes a huge amount of time to build a single model for a single use case or SKU — time that most organizations don't have in order to respond quickly to a changing marketplace. With automation, this entire process can be scaled and democratized tremendously.

In addition, real democratization means that business analysts can use automation to get to the results they're looking for much faster, without leaning too much on their data science team. By engaging with subject matter experts who truly understand the business, your company can use automation to help reduce the burden on data scientists so that they can focus on more strategic areas.

In the end, it's all about adaptability. Companies that can adapt and leverage this new technology will be the ones who come out on top. This is why building teams that are a combination of data scientists and domain experts that use some form of automation is the way to expand the scope of your AI projects and realize greater ROI.

- ✔ **Maximizing operational efficiency.** Ensuring a frictionless customer experience is essential to building loyal customer relationships. An important component of this is scheduling staff appropriately so that there are no gaps in service, ensuring employee retention, making sure deliveries are on time, and even ensuring the swift fixes of issues throughout the supply chain.
- ✔ **Targeting marketing promotions.** As retail shifts to online shopping more and more, historical transaction data becomes easier to collect. It's vital that companies turn that data into marketing communications that are relevant. Many organizations will send a customized flyer recommending items they might like in a specific size or color. With this kind of customization, organizations can reap big benefits in lifetime sales.
- ✔ **Making media that matters.** For media companies, it's essential to capture data on what stories resonate with people and where people are turning for their news. In turn, this information can be used to increase subscriber numbers and to recommend articles that they are likely to enjoy.
- ✔ **Reducing customer churn.** For any company, it is less expensive to keep a customer than to acquire a new one, which is why reducing customer churn is always a high priority for every organization. Knowing where there might be service outages, low supply of product, or staffing issues are all ways companies can troubleshoot problems before they hit customers. Companies can also target their marketing efforts and promotional materials to valued customers in order to increase loyalty and provide the best service possible.



**CASE STUDY:**  
**BOSTON RED SOX.**

**THE CHALLENGE:** Even a franchise as universally successful and iconic as the Boston Red Sox — four World Series championships since 2004 paired with massive popularity off the field — is not immune to challenges. To address some of the off-field obstacles, the Red Sox turned to the same thing that helped them win those championships on the field: advanced analytics and predictive modeling.

While industry revenues and franchise valuations across MLB continue to grow year over year, there are a couple of worrying trends that are on the mind of every team's executives. First, there is declining interest in Major League Baseball in an increasingly competitive entertainment market where baseball franchises are competing not only against other sports but all types of entertainment, including online platforms. Second, attracting younger fans to a sport with an ageing core demographic has proven difficult, as evidenced by the social media followings of baseball's biggest stars that are dwarfed by that of every other major professional league.

**THE SOLUTION:** The team tackled dozens of analytics projects both on the field and off. On the field, they looked at questions around player output, trade targets, in-game decision-making, and individual player coaching. Off the field, they addressed issues like marketing strategies, ticket pricing, concession and merchandise sales, and capital expenditures.

By replacing time-consuming manual processes with automated ones and having the results automatically fed into the data warehouse, the team was able to realize huge value, increase their bandwidth for their data science team, and put more streamlined processes into place for decision-making.

- ✔ **Building better banking relationships.** Banks and financial institutions have so many questions that they need to answer on a daily basis. Who will sign up for direct deposit? Will a new offer resonate better with one demographic over another? When do customers in a specific area do most of their banking? The answers to these questions and more are the way that banks make targeted and more insightful recommendations to customers.
- ✔ **Delivering better healthcare outcomes.** The healthcare industry requires a tremendous amount of flexibility. Whether it's keeping up with orders of supplies, setting the right amount of staff for shifts, or determining who is likely to be readmitted, healthcare professionals and the organizations that support them can use customer analytics to make well-informed decisions.



**How does AI make all of this possible? How does the technology work to help organizations answer their most pressing questions around customer analytics? Let's take a closer look at how organizations put AI to work so that they are making decisions and not guesses.**

- ✓ **Marketing Mix Optimization.** Companies often rely on third-party media consulting companies to do studies that recommend the right marketing mix. This process can be time-consuming and costly. For just a handful of SKUs, the answers to these studies can take weeks to produce, and by the time the analysis is delivered, the strategy may be out of date. Because of the time and cost involved, many companies only run these programs a few times a year. Running automated customer analytics programs – where data is ingested automatically and machine learning models are built with automated tools – is much more cost-effective and scales far better to cover the sheer number of products that most companies need.
- ✓ **Next Best Offer.** Once you have a customer, it's far less costly to keep them and nurture the relationship than to replace them with a new customer. Knowing what to offer them next is key to keeping them engaged and loyal. By analyzing customer behavior and understanding what kinds of purchases similar customers tend to make, organizations can make the best offers on products and reduce customer churn. This can only be achieved with advanced analysis that employs AI to analyze and make sense of all of the purchasing patterns the customer exhibits. Traditional statistics simply doesn't work on this scale.
- ✓ **Next Best Action.** One of the biggest questions companies have is how to act on their marketing data. If your data tells you that a customer is engaged, what's the next best action to take with them? When there are multiple paths that you could take after analyzing your marketing data, your analytics can tell you which offer, product, or service is the most appropriate for your customers. Understanding the next best action helps your company implement the most effective programs to engage with customers the right way through the best channels and with the most relevant offers.



**CASE STUDY:**  
**84.51°.**

**THE CHALLENGE:** 84.51° — a data science, insights and media company that serves the retail market — is in the unique position of having a very large data science community of over 200 data scientists. Prior to using automated machine learning, the team engaged in a whole process of setting up validation procedures correctly, hyperparameter tuning, feature engineering, and deploying their models effectively so that they were useful to the whole organization. This manual process was time-consuming and not helpful for scaling operations.

**THE SOLUTION:** With DataRobot, the data scientists were able to move away from those mundane tasks enabling them to focus on strategy and workflow instead. In particular, prediction explanations help them to become leaders in their AI projects. DataRobot got pushed into the hands of a lot more data scientists, enabling them to deploy their models and solve problems that they wouldn't have been able to solve at such scale before.

- ✔ **Lifetime Customer Value.** Estimating the future value of a customer is one of the most valuable outputs customer analysis can provide. It can help you avoid the pitfalls of realizing short-term gain without long-term value. By understanding a customer's past purchases, you can target the right people for your product, extending their lifetime value and building loyalty by offering the right product at the right time.
- ✔ **Propensity Modeling.** Knowing which leads you have generated will convert to a purchase is invaluable. This kind of customer analytics allows you to peer inside your marketing campaigns to understand who will be the most valuable audience for every stage of your sales funnel. This can help you prioritize outreach, targeting the hottest leads based on the information that you gather about them, based on their title, industry, size of their company, previous purchasing history, and other types of relevant data.



## How does DataRobot help with customer analytics?

Building a successful AI program requires a few key ingredients – repeatable success, knowledgeable partners, and a technology platform that is seamless for your whole team. This means implementing a solution with features that will unlock the value of your AI.

With an end-to-end platform like DataRobot, you can solve many of the issues that normally plague many customer analytics projects. AI can help you wrangle the enormous volume of data that many customer-facing organizations collect, while moving quickly to answer important questions on relevant marketing outreach, product assortment and supply, and store location. Our enterprise AI platform capabilities include:



**Data preparation**



**Getting from raw data to value**



**Guardrails to ensure that consistent best practices are followed**



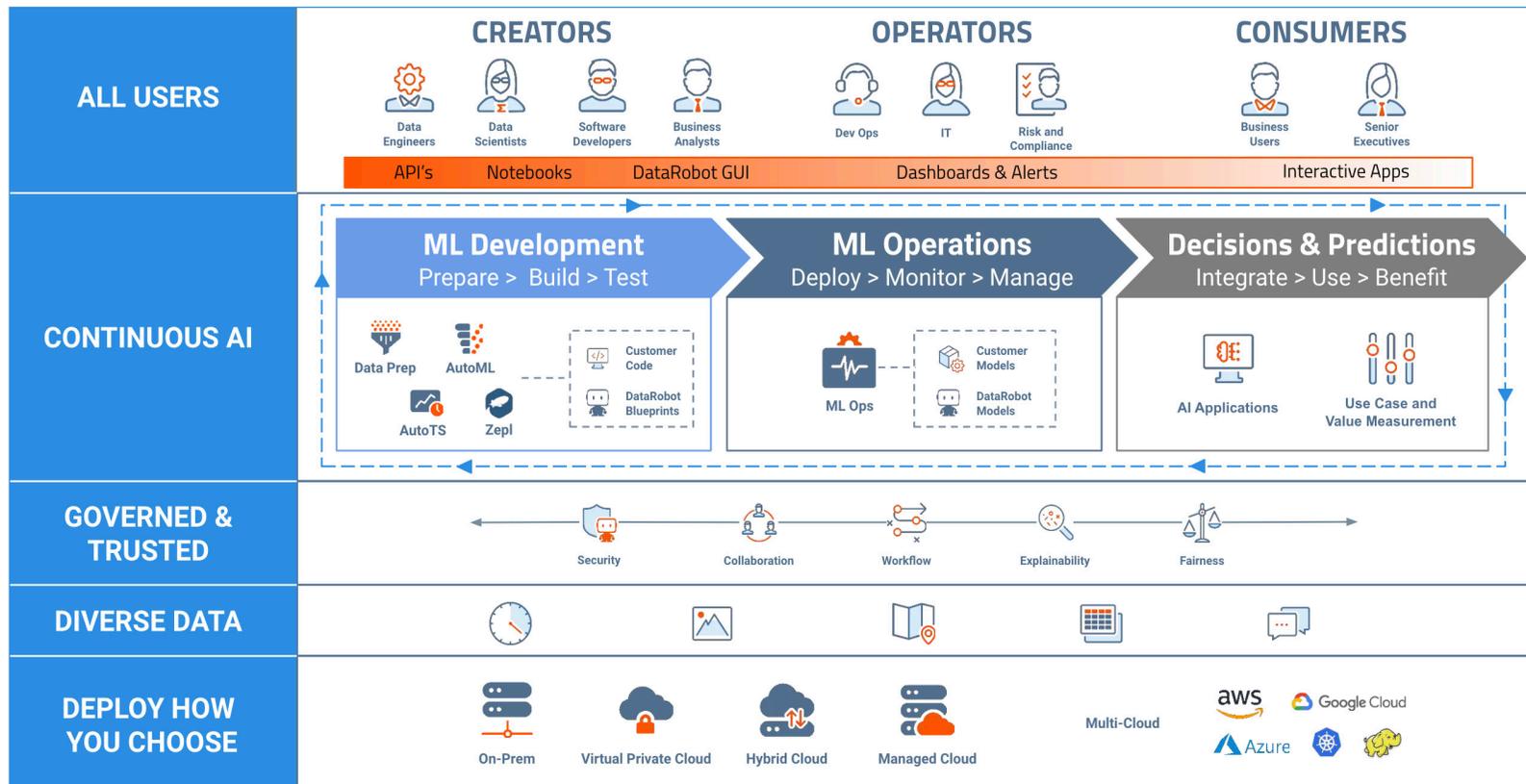
**Model deployment, monitoring, and management**

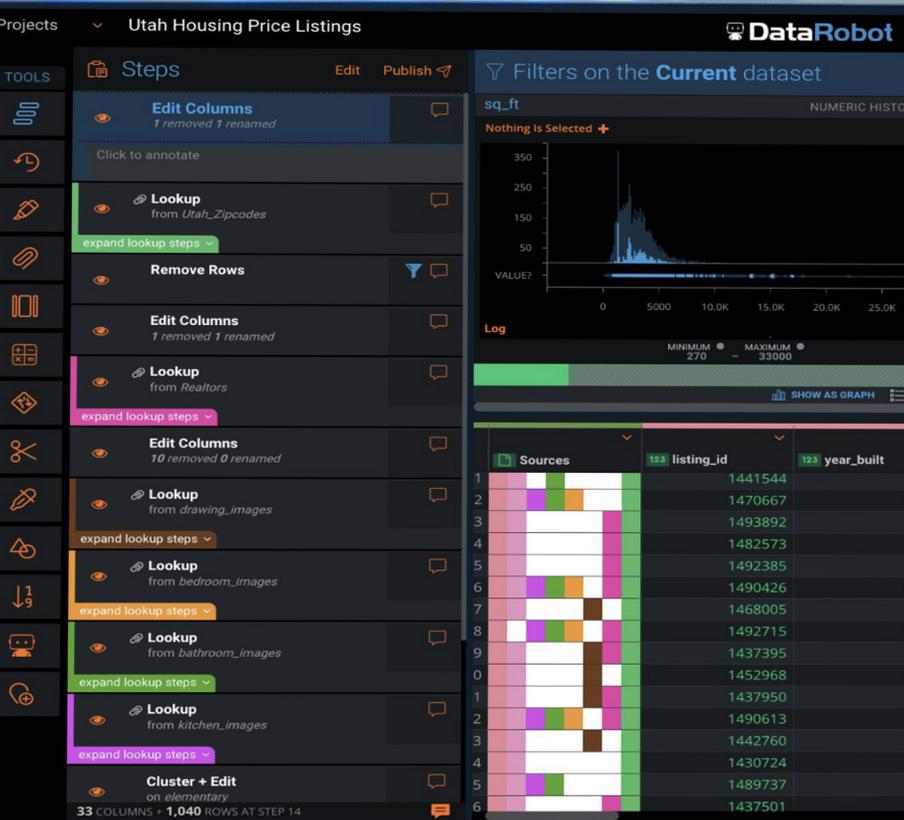


**Trust in your AI**



## DataRobot Augmented Intelligence Platform





## Data Preparation



### Visual Data Prep For Everyone.

Visual and intuitive UI that enables anyone to explore and prepare data for machine learning.



### AI-Assisted Intelligence.

Understands semi-structured and imperfect data. Automatic join detection and fuzzy matching.



### Built for Big Data.

Powered by Apache Spark™ to scale to data volumes beyond samples on elastic multi-cloud architecture.



### Collaborative.

Team-based project development, annotations, and tagging allow for easy sharing and collaboration.



### Governed and Trusted.

Records of every step for reuse and easy data lineage tracking for explainable AI. Fine grained access control.



## Automated Machine Learning



### Accessible.

Build AIs that generate tangible value, no matter your machine learning experience.



### Comprehensive.

Traditional data science approaches and the best in emerging machine learning, all out-of-the-box.



### Operational.

Easy to connect to your environment, combine any kind of data and deploy models anywhere.



### Explainable.

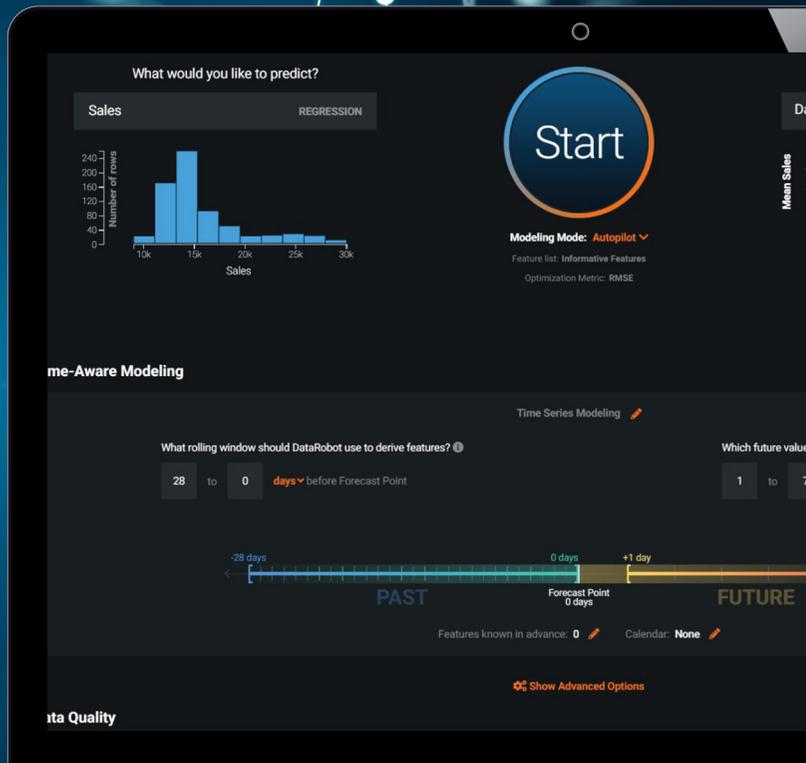
Control every step and understand every prediction. A level of trust the business can rely on.



### Reproducible.

Fully integrated data science best practices, end-to-end. Safely run more experiments and remove any unknown.





## Automated Time Series



### Unmatched accuracy right out of the box.

Through the automation of advanced algorithms, time-aware feature engineering and backtesting.



### High-scale forecasting for millions of items.

AI that scales and automates forecasting for millions of items at once.



### Supports real-world business constraints.

Accommodates real-world complexity and factors environmental events and changes into your forecast.



### Actionable AI and production-ready insights.

Easy to deploy, monitor and manage models in production and react to changing conditions.



## Machine Learning Operations (MLOps)



### Monitor everything everywhere.

One central system for all production models, regardless of where they were created or deployed.



### Superior machine learning health in a volatile world.

Machine learning-specific monitoring out of the box detects problems quickly. Challenger models identify fixes.



### Governance and trust.

Maintain control at scale with governance controls, lineage, and fairness monitoring.



### Paved road to production.

Take models all the way to consumption every time with powerful scoring interfaces and interactive apps.



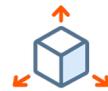


## AI Applications



### **Easily consumable.**

Any predictive model can become an AI app in minutes with no coding required.



### **Effortlessly Distributable.**

Share any AI app with anyone in your ecosystem to drive consistent insights and better decisions.



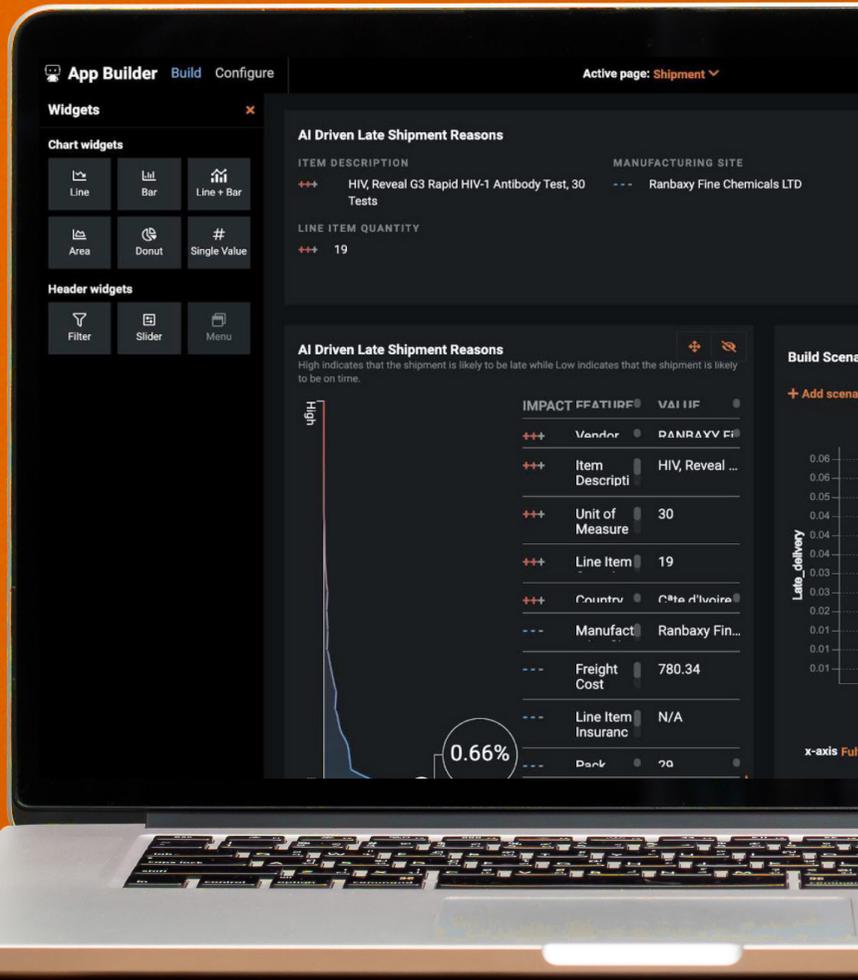
### **Accelerated time to value.**

Iterate and improve ML models by socializing model results through an AI App with the business.



### **Simply accessible.**

Quickly discover powerful machine learning applications to help you get your job done quickly.





## How will you realize the value of your customer data?

Customer analytics presents its own unique set of challenges for companies. While most companies recognize the importance of AI-driven decision-making for their businesses, many struggle to turn their data into true, actionable insights that can increase ROI. In addition, there are simply not enough data scientists with the full range of domain expertise to help businesses scale their AI operations. Add to that the sheer volume of data available, and most companies find themselves in the position of having an embarrassment of riches with their data but not knowing how to turn that treasure trove into real returns.

Enter automation to bridge the gap between data science teams and their business teams and to help organizations scale to meet ever-changing marketplace demands. With the DataRobot enterprise AI platform, businesses can tap into the power of augmented intelligence to understand things like next best offers, lifetime customer value, and propensity modeling, among many other insights. We've seen our customers quickly answer some of their most pressing marketing, product, and service questions to realize tremendous value for their customers and their bottom line.

Contact DataRobot today to unlock the potential of your data with a [free demo](#) or a [free trial](#) of our solution.



## DataRobot

DataRobot a leader in Augmented Intelligence, delivering trusted AI technology and enablement services to global enterprises competing in today's Intelligence Revolution. DataRobot's enterprise AI platform democratizes data science with end-to-end automation for building, deploying, and managing machine learning models. This platform maximizes business value by delivering AI at scale and continuously optimizing performance over time. The company's proven combination of cutting edge software and world-class AI implementation, training, and support services, empowers any organization – regardless of size, industry, or resources – to drive better business outcomes with AI.

Learn more at [datarobot.com](https://datarobot.com)