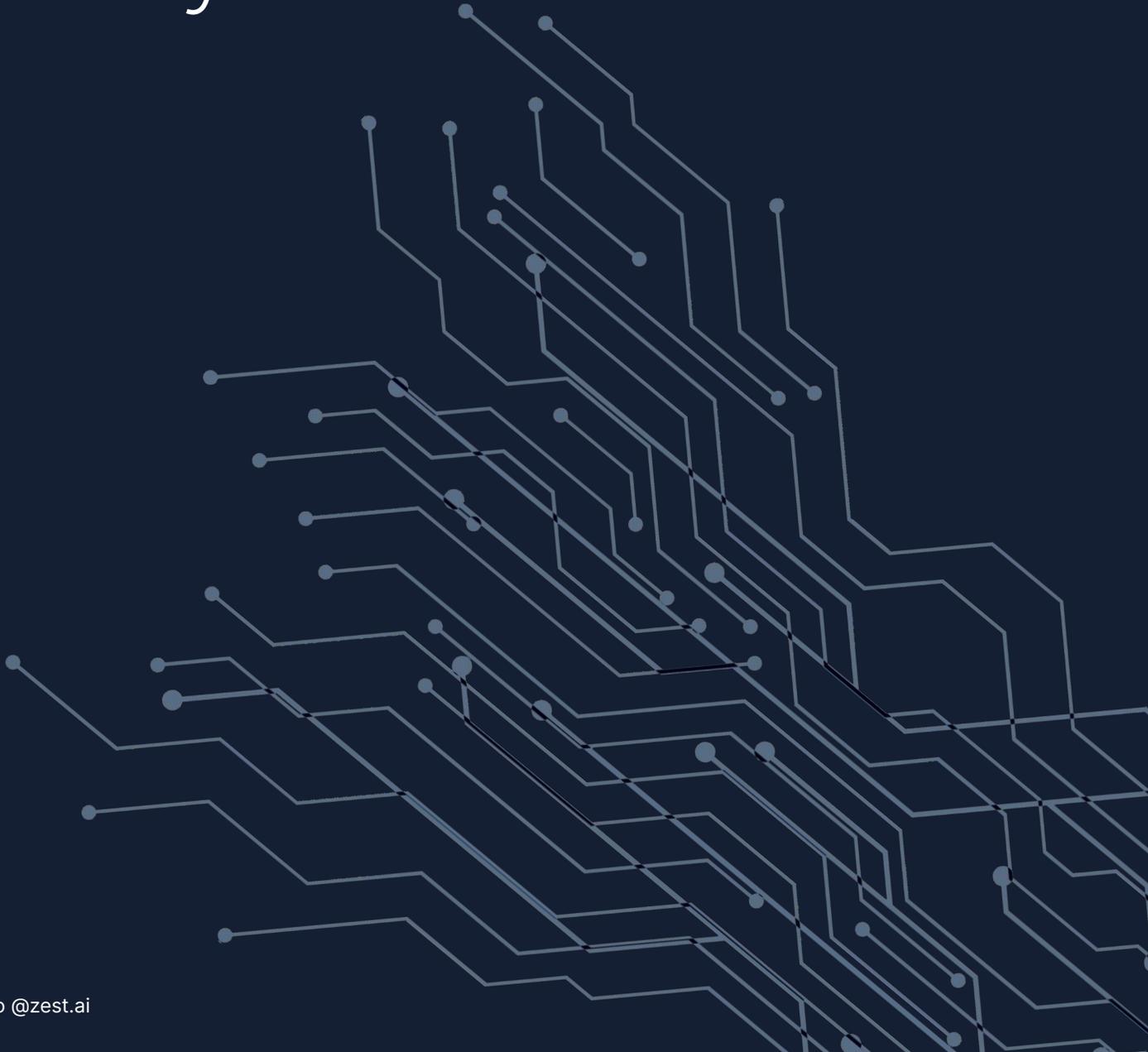


# 3 Ways Machine Learning Can Make Auto Lenders More Money



# How Machine Learning Can Make Auto Lenders More Money

Automakers are reporting solid U.S. sales so far in 2021, coming off a decent holiday season. Supply is tight, but auto loan originations are forecasted to remain at a healthy 14 million in the first half of 2021 with a greater share of loans shifting to the prime and above tiers, according to [TU's 2021 Consumer Credit Forecast](#).

While the outlook seems upbeat, operational challenges persist. Traditional credit scores are scrambled right now, making it harder to assess borrower risk. The shift to digital is pressuring everyone to make decisions as fast as the giants of the industry or risk losing share.

The central challenge: How do you make better and faster decisions to safely build your portfolio?

To adapt, lenders are re-thinking their approach and considering using machine learning-based underwriting. Machine learning (ML) is proven to outperform traditional scoring methods by using more data and better math to predict borrower outcomes more accurately. ML allows lenders to boost approvals with no added risk and respond more quickly to market volatility.

## 2021 Auto Loan Originations Forecast

6.8M

Auto loans originated in Q1 2021 (proj.)

7.4M

Auto loans originated in Q2 2021 (proj.)

"With widespread unemployment and forbearance programs in place, FICO scores do not provide meaningful insights as the average is the highest since FICO started tracking in 2005."

## Federal Reserve, Dec 2020

Here are the three biggest ways switching to ML underwriting can make auto lenders more money:

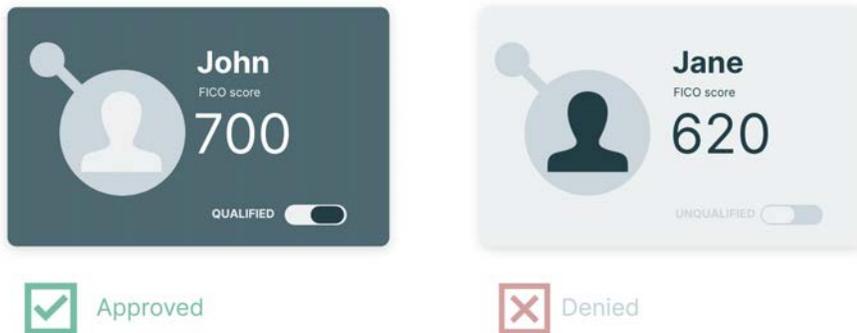
# Raise approvals and reduce losses

ML allows auto lenders to incorporate hundreds more variables than traditional models can handle. Analyzing more data (especially trended tradeline data) and tapping into the power of millions of correlations provides more nuanced views of consumers that lead to increased approvals and fewer losses.

How? ML models are great at replacing risky borrowers who may have looked good on paper with more good borrowers overlooked by traditional underwriting techniques. Here is an example:

## Traditional Model:

The applicant that looks good on paper, gets approved. However, is John the more creditworthy applicant?



**Zest AI machine learning model uses more variables and uncovered red flags that reveal John is a riskier applicant than his credit score would indicate.**

### Traditional Data Points



- 40 accounts owned

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- 12 late payments of 30-60 days

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- 0 new credit accounts

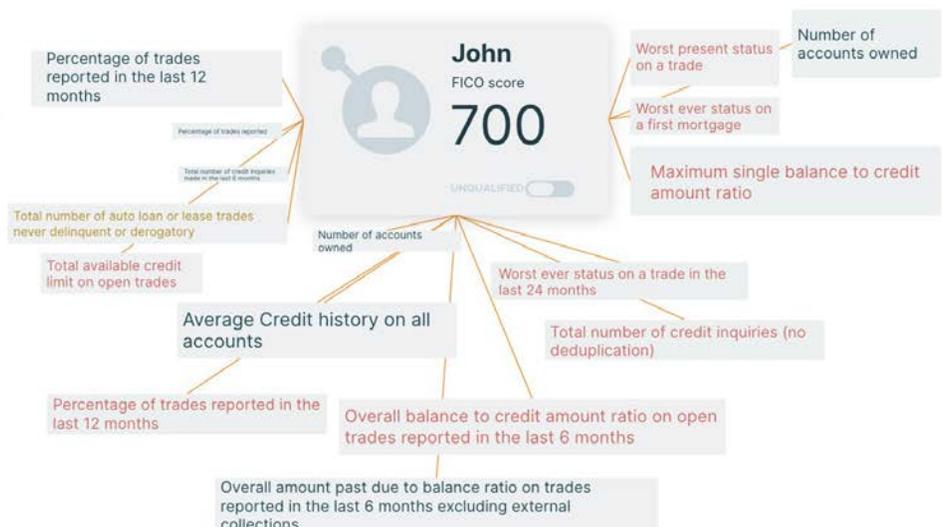
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- 20 years credit history

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- 10 credit mix

### Zest AI Data Points



The Zest AI machine learning model also reveals that Jane has a thinner file, but more high-quality accounts (i.e. mortgage).

Traditional Data Points



- 20 accounts owned
- 2 late payments of 30-60 days
- 2 new credit accounts
- 12 years credit history
- 14 credit mix

Zest AI Data Points



Zest AI machine learning model swaps-out John (riskier applicant) and swaps-in Jane (less risky candidate).



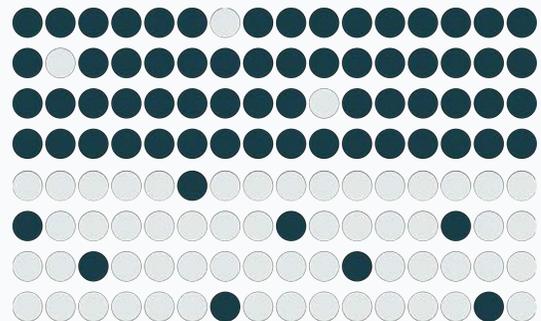
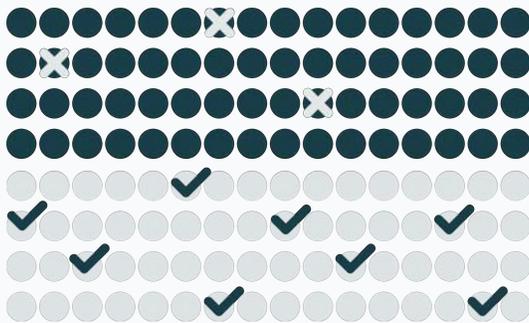
- Zest Denied
- Defaulted on Loan

- Zest Approved
- Repaid Loan

With more accurate risk-assessment capabilities, auto lenders can increase approvals while holding risk constant across the portfolio. This delivers better results across every lending objective, from reducing losses to increase in approvals for thin file borrowers. And with more confidence about whom to say yes to, ML also drives higher levels of auto-decisioning. Now that you can more accurately rank risk, you can apply risk-based pricing to increase yield.

## Machine Learning: Swapping out Risky Borrowers with Good Borrowers

### Swap In | Swap Out



- Qualified
- Unqualified
- ✓ Creditworthy applicants misclassified as high risk
- ✗ Risky applicants misclassified as creditworthy

#### Results

+15%

More approvals at the same risk levels

# Improve approved loan yield with risk-based pricing

In a highly competitive market, you have to win as many loan offers as you can make. Risk-based pricing is a core strategy in building that win rate.

One of the advantages of ML is that because ML modeling uses so many variables (especially trended data) to improve default risk prediction, lenders can see a spectrum of quality around each credit score. That is, one person with a FICO score of 600 may be a much better risk than another person with the same score- and with Zest, you can see the reasons why. Having a better sense of a person's true credit worthiness means lenders can better price loans and offer more competitive rates.

We put this into practice with one large auto lender last year. Using a 5,000-variable Zest model in place of a traditional model with a couple of dozen features, we found that some customers were priced higher than they should have been and deserved a lower rate.

The lender could have more than made up for the price-cutting by moving a greater number of higher-risk applicants into higher-priced tiers.

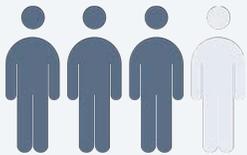
Consumer demand is fairly inelastic when it comes to price in auto credit, so the trade-offs across the customer pool should result in better overall portfolio yield. Our research suggests that ML-based yield optimization can produce gains of \$500,000 to \$4 million for every \$100 million in originations, depending on a lender's specific portfolio risk characteristics.

As recent hiccups in loan performance show, auto lending is a business that can be challenging even in a booming economy. By providing better outcomes for drivers, ML offers a way to build a more resilient lending business no matter what the economy is doing.

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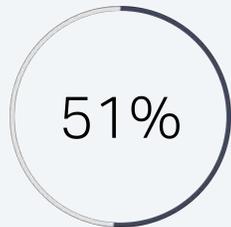
# Increase Competitive Advantage and Operational Efficiency

COVID-19 has accelerated digital adoption in auto lending and increased consumer expectations for faster decisions. According to the [Harris Poll 2020 Consumer Credit Survey](#):



3/4

Three in four Americans said that decisions should be instantaneous, taking no longer than a few seconds.



51% of Americans said they would switch to a financial institution that uses machine learning rather than humans to make loan approvals.

The key takeaway from the report is that lenders are not meeting consumer expectations.

With so many lenders lagging behind consumer expectations, leveraging ML for increased automation and auto decisioning provides an opportunity to gain a competitive advantage and safely capture more market share - all while meeting consumer expectations.

In addition to building an early-adopter advantage with consumers, faster decisions also help auto lenders stand out and drive growth with car dealerships.

Zest AI customers that are using ML credit models for auto-decisioning report an increase in loan volume from auto dealerships due to their consistently fast response times.

Greater automation also allows for faster growth and more flexible scalability while requiring fewer operational resources. With ML credit models, auto lenders can increase productivity gains while reducing operational costs.

As auto lenders look to adapt and thrive in this new environment, ML plays a key role in developing a competitive advantage to grow portfolios safely while also building a foundation for enduring success.

# Real-World Results: Prestige Financial Says Yes to Better Borrowers

Prestige Financial, a specialty auto lender with over \$1 billion in assets, needed to find a way to say yes to more borrowers without taking on additional risk. A recent rise in defaults led the company to raise their lending criteria which meant too many applicants were being denied auto loans.

To solve their lending challenges, they turned to Zest to accelerate the development of a new machine-learning credit model. Using the Zest Model Management system, the team was able to identify 2,700 unique borrower characteristics from data Prestige already had and quickly trained a new, more robust machine-learning model in a matter of weeks.

With AI-Powered underwriting, Prestige increased approvals for thin-file borrowers by 400% and reduced credit losses by 33%, all while holding risk constant. Today, higher approval rates and better pricing are driving current dealer customers to send more business to Prestige

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“The most important decision we have made to affect the future growth of our business was to partner with Zest. Zest helps lenders like us build models of predictability that help us win.”

**Bryan Henrie,**  
President and CEO, Prestige

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33%

Reduction in credit losses

400%

Increase in approvals of thin-file applicants

100 bps

Increase in average loan yield

# Ready for better lending?

## Jumpstart your ML strategy

Here is a step-by-step approach and best practices from Lenders who have moved to AI-powered underwriting:

Get your copy of:

[A Lender's Roadmap To AI Adoption](#)

