6 AI Solutions Every Asset Manager Needs
Introduction

The Asset Management industry is undergoing the most dramatic change in its history. Long-standing pressure points — and emerging revolutions — are converging to create a unique, once-in-a-generation opportunity for the “buy side” to harness the power of Artificial Intelligence and Machine Learning (AI/ML) to transform their business. Whether you’re a long-only, active money manager, a quantitative/systematic hedge fund, a private wealth management firm, or something in between, harnessing the power of AI and Machine Learning has emerged as the imperative technology play for every money management firm.

Several major trends and shifts in the investment management business have converged in recent years, putting digital transformation and AI enablement at the top of every executive’s agenda. The widespread adoption of emerging technologies such as AI/ML combined with the increasing ubiquity of data (including alternative data) has presented a unique opportunity for asset managers to accelerate their use of predictive analytics. Some of the industry drivers behind the revolution on the buy side include:

- Increasing fee pressures and shrinking profit margins are forcing significant cost-cutting, operational improvement and efficiency, and client servicing improvements.
- Market share erosion for active managers coming from traditional (e.g., passive, ETF, quant) and non-traditional (e.g., robo-advisor, “big tech”) competitors.
- The rise of quantitative investing, the associated shift from fundamental to quantitative, and the simultaneous rise of “smart beta” and “quantamental” investing strategies.
- Increased client and employee expectations for access to information, data, and technology, with predictive modeling and optimization leading the way.
- Continued regulatory pressure (Reg BI, MiFID II, etc.) driving transparency, process standardization, and risk management.
As the buy side faces the most challenging period in its history, AI and Machine Learning are being used today to counter the onslaught of obstacles — and help those same firms achieve significant ROI with each successful deployment of a predictive model. While there exists significant hype today about using AI to predict securities prices — as if AI were some magic box — buy side firms are actually finding very tangible value using AI in more practical and powerful applications.
Below are six of the top AI/Machine Learning solutions in use by asset management firms today, across the investment life cycle.

1. OPTIMIZING THE USE OF FUNDS — For Chief Investment Officers

Investment management firms are under constant pressure to optimize their use of funds, with little idea of what future investor fund inflows and outflows may be. Excess cash is inefficient and must be invested quickly, whereas a cash shortfall may require expensive borrowing to meet immediate liquidity needs until asset sales are complete and settled. In extreme cases, it may even lead to a temporary suspension of dealings in funds, causing significant reputational damage. Fund managers need to anticipate changes in cash position due to cash inflows from new investor demand, income/gain distributions from holdings, and outflow from requests for redemption.
By employing a fund net inflow/outflow prediction model based on historical flow patterns, CIOs can determine likely fund inflows and outflows and manage their cash positions more efficiently, ensuring greater returns for their investors and better fund performance for their funds. And being able to predict outflows from certain funds can position a firm for better cross-sell/upsell opportunities to other investment products.
As ownership of corporate bonds by asset managers increases sharply, being able to predict when a particular bond issue is about to be downgraded or upgraded gives portfolio managers an edge. Changes in issuer ratings or outlook can cause significant price fluctuations (for example, a downgrade from BBB- to "Junk" can cause sharp price declines in an issue) and may necessitate accelerated sale if the issue becomes non-investment grade, either to avoid potential future losses or stay within fund covenants.

Investors can build models using historical examples of rating changes along with historical financial statement data using machine learning. These models learn which changes in financial conditions are predictive of a rating change and are then able to predict the probability of an upgrade, downgrade, or change in outlook from one or several rating agencies over, for example, the next three months. This ability allows the fund manager to take preemptive action by adjusting or hedging positions.

**2. CREDIT RATINGS UPGRADE/DOWNGRADE PREDICTIONS — For Portfolio Management**

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**Mutual funds' ownership share of corporate bonds has increased rapidly**

Source: Federal Reserve Bank of New York
3. BEST EXECUTION DECISION SUPPORT — *For Trading*

Buy side firms globally – through MiFID II, SEC, or other authorities – have a regulatory obligation to their investors to achieve and demonstrate best execution. This means they need to minimize transaction costs and analyze the transaction cost of each trade. In addition, buy side firms can predict the optimal order routing strategy for each order, based on historical trends and patterns.

Using Transaction Cost Analysis (TCA) information on historical trades and combining it with additional information on each trade (e.g., security, broker used, algorithm used, algorithm settings, market environment at the time, etc.), creates a model which predicts TCA and scores different trading strategies when a trade is proposed, thereby identifying which trading strategy will likely give the best execution for the client.
More than 50% of the cost of operations is spent on dealing with problems with trade failures, cash reconciliations and the like. Using historical logs of trades, process failures, and reconciliation breaks, machine learning can predict the likelihood that a particular trade will fail automated processes, and if so, what the cause of the failure is likely to be.

4. OPERATIONAL FAILURE PREDICTION AND REMEDIATION — For Operations

By some estimates, over half the back office budget for fund managers is spent on finding, researching, and fixing problems with trade breaks, reconciliations, and other operational transaction errors. Using historical logs of trades, process failures, and reconciliation breaks, machine learning can predict the likelihood that a particular trade will fail automated processes, and if so, what the cause of the failure is likely to be.

These models can also predict at which stage in the trade life cycle or reconciliation process such a break could occur and even which preventative action or remediation strategy can return the exception to straight-through processing (STP). This can reduce the costs associated with routine break and error handling dramatically, allowing limited operational resources to be deployed where they can add the most value.

Anomaly detection algorithms can also be used to alert back-office staff when a data value, for example, is highly unusual. Pricing errors, for example, can be found this way. These can be difficult and costly to fix if they are not found quickly and then propagate through the system.
5. PREDICT AND RESOLVE CLIENT CHURN — For Client Services

Asset management firms can identify clients at high risk of attrition by learning from examples of clients that have closed or moved accounts in the past. Preemptive client engagement can uncover issues driving dissatisfaction, reduce churn, and reveal opportunities for improvement in products and services.

Also, machine learning models can help firms understand the circumstances that are predictive of attrition, whether they be operational, service-oriented, or related to fee structure. Armed with a better understanding of what factors predict attrition, changes can be made to retain your best clients.

Current Business Process

Customer is unhappy → Call center rep tries to help → Sometimes they are successful

Future Business Process

All customers → Each night, the model identifies customers most likely to complain → Proactive outreach to help unhappy customers → Lower call volumes, happier customers, lower churn, fewer challenging calls

Customer calls in → The same model evaluates incoming calls in real time → Calls are routed according to risk → More experienced reps handle more difficult calls

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6. TARGETED MARKETING AND CROSS-SELLING — For Marketing

Pulling clients — and advisors — up the value chain of an asset management firm has long been a hallmark of successful investment management firms. Understanding how your most loyal and profitable clients started out can inform how your firm should be targeting potential new clients and driving those clients up to your top tier.

At the same time, pushing indiscriminate offers to clients and prospects has been proven to be ineffective — and even damaging — in communicating with clients and prospects. With machine learning, firms can use their extensive client relationship data to identify which prospects, leads, and referrals are likely to become among their most profitable and prioritize those. Asset Managers can also predict which clients — or advisors — are likely to have a need for specific products and services. Firms can then make relevant offers at the right time, demonstrating client awareness, increasing the effectiveness of targeted marketing.

1. Multichannel Marketing Attribution
2. Online Ad Bidding
3. Funnel Modeling
4. Next Best Action
5. Product Recommendations
6. Banner Ad Personalization
7. Reverse Engineer Pricing
8. Price Elasticity Modeling
9. Next Best Offer, Cross-Sell, and Up-Sell
10. Sentiment Analysis
11. Net Promoter Score
12. Lifetime Customer Value
Conclusion

The asset management industry is undergoing fundamental changes at a rapid pace. By taking advantage of proven AI and Machine Learning solutions, asset management firms can become smarter — whether that results in increasing revenues, lower costs, improved client acquisition and retention, reduced risk, or all of the above — and accelerate their digital transformation efforts in an easy, cost-effective, and wide-reaching way.

Whether it’s one of the six solutions named above or one of the many other use cases for a buy side firm (e.g., call center optimization, corporate event prediction, trade volume prediction, etc.), AI/Machine Learning can increase revenues, reduce costs, and improve client service dramatically. Anytime the need to predict, forecast, optimize or otherwise improve a process where historical data is available, data scientists and “data citizens” alike can harness the power of predictive modeling and optimization at the core of the investment process or to the far reaches of client servicing.

DataRobot has helped many large and small financial institutions build and deploy AI solutions like the ones described above. DataRobot’s automated machine learning platform allows organizations to increase their capacity and speed-to-market without having to scale or build expensive data science teams and analytics infrastructure. By automating machine learning, DataRobot enables investment management firms to position for the future — to become AI-enabled.
DataRobot helps enterprises embrace artificial intelligence (AI). Invented by DataRobot, automated machine learning enables organizations to build predictive models that unlock value in data, making machine learning accessible to business analysts and allowing data scientists to accomplish more faster. With DataRobot, organizations become AI-driven and are enabled to automate processes, optimize outcomes, and extract deeper insights.

Sign up for a free trial today to find out how DataRobot can help your organization at datarobot.com