

Master the data. Master the

HSBC is using AI to identify potential high-growth stocks

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In the realm of investing, a lack of insight or critical knowledge leave your portfolio lacking. Fortunately, we've transitioned to a rich society where a wealth of information can be found for the smallest business. Unfortunately, knowing where to look and determining what is relevant in this ocean of facts and figures is growing to an inhuman task.

"According to IBM, 90% of the world's data was created in the past two years," says Robertson, Vice President, Quantitative Investment Solutions Sales at HSBC Markets. "And we'll probably be saying the same thing again in another two years."

Further complicating matters, much of this recently generated information is in natural language text and other less accessible, unstructured formats, such as social media posts, images and videos. Harnessing the relevant details from the data to provide HSBC with new insight about a particular company or opportunity is what leads to better investment decisions.

"It's the pieces of information that don't fit into a spreadsheet," says Robertson. "It's the metadata—the information around the data. For example, you can learn a lot if you take into consideration how many times a company talked about certain topics during a recent earnings call compared to how many times they talked about those same topics in the past, and subsequent discussion on social media. It's the synthesis of both traditional and alternative data to find connection points and insights. That's not the sort of thing that your typical fundamental analyst can do for you."

She continues: "All of this information is out there, publicly available. If you have the time and people, you could sit on Twitter all day and triangulate it. But the volume of data is just beyond human comprehension." And when even the experts are overwhelmed by the surface of the data that's available, there's a clear problem—and an opportunity.



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HSBC is using AI to identify potential high-growth stocks (2:28 min)

Huge sales volumes

HSBC has realized more than USD 2 billion in sales linked to AiPEX

“Trust is incredibly important and carries a lot of trust. So we have a sense of credibility that is high in the market.”

Holly Robertson

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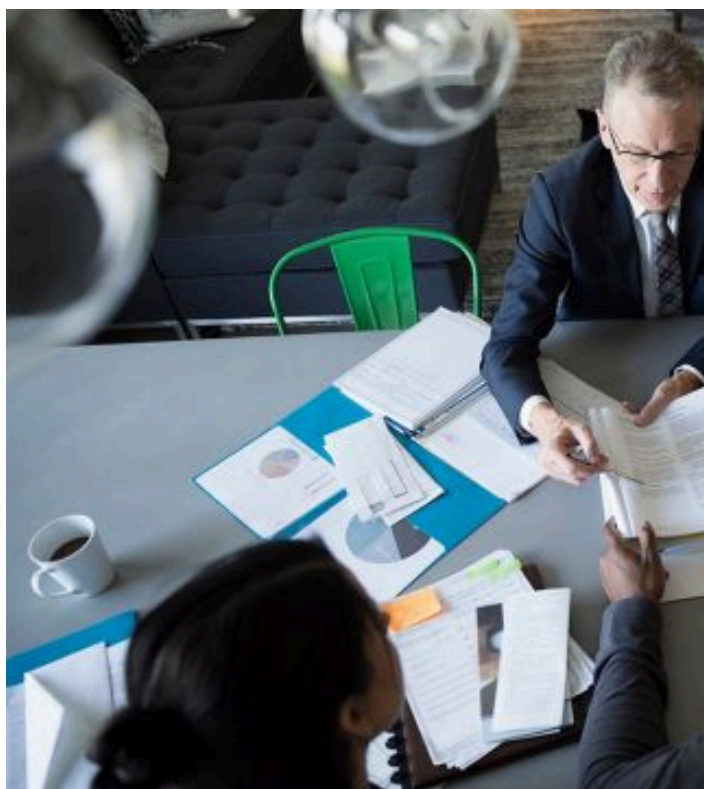
Investing in Big Data

Alongside this explosion of information, there has been a corresponding surge in interest regarding retail investing and the overall stock market. “\over the last two years,” says Robertson. “Previously, we were dealing with investors or those with an institutional focus, but now individual investors excitement at levels we just haven’t seen historically. More people are seeing into which companies are doing well and why.”

And getting that kind of insight to these newer—and often independent and risk-averse—investors was a focus for the Quantitative Investment Solutions (QIS) organization at HSBC.

“We pride ourselves on being able to take the seemingly complex and break it down so that the individual investor can understand and hopefully benefit from it,” says Robertson. “So when we noticed that institutional investors were already outsized returns for their customers using AI, we wanted to bring that advantage to the individual.”

In particular, the bank wanted to harness the power of AI to scan through the expanding wealth of natural language text and unstructured data to identify companies with a higher growth potential. And by building a risk-controlled, excess return strategy based on the stocks of these businesses, HSBC could pioneer a groundbreaking product that offered data-driven investment options to this broader pool of retail consumers.



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Partnering with AI experts

“As we looked at the amount of relevant data that’s already out there, it was overwhelming,” recalls Robertson. “We needed AI—and the people that knew it—to power this idea of taking all of this structured and unstructured data to make predictions on growth.”

And after a series of discussions around Silicon Valley, HSBC became interested in working with IBM Business Partner EquBot Inc. to build its new index.

“The head of their QIS organization actually reached out to us directly,” says Khatua, Chief Executive Officer of EquBot. “He said that he was interested in the work that we were doing, leveraging AI and machine learning to get into better investment decisions. So we had several conversations with him to help them understand the technology—including IBM Watson—behind the EquBot investment platform.”

“IBM seemed like a pretty good place to start when you’re trying to build an index that’s using AI,” says Robertson. “And the EquBot team brought a lot of experience. They knew what they were talking about in terms of engineering, data distribution and asset management side. It just felt like a good collaborative start.”

The new HSBC AI Powered US Equity Index (AiPEX) uses the EquBot AI investment platform as a stock picker, selecting companies with a potential for growth and quantifying relationships not readily apparent to humans. [IBM Watson](#) and [IBM Watson Natural Language Understanding](#) provide the analysis and information enrichment that produces the insights used by the platform. [IBM Watson Studio](#) oversees the proprietary AI models that manage these resources, counteracting bias and data drift.

“Our commitment is to use the technology that’s the best in class for our clients,” explains Art Amador, Chief Operating Officer and Co-Founder of EquBot. “We explored various options to work with our AI investment platform, and Watson Discovery and Watson Studio were the most effective. They ended up producing the best decisions. And IBM has a tremendously strong track record. It has a history known to the investors and clients that we speak to regularly.”

To prep the associated AI models, EquBot used the IBM technology to aggregate and ingest roughly 20 years of historical data and text, including both structured and unstructured formats. “It took just north of three months for us to properly fine tune the different parameters,” recalls Amador. “And that was done by the HSBC QIS team.”

He continues: “How frequently to rebalance, how to screen out companies with issues, how high of a percentage of any given company should the index include. The HSBC team could run multiple iterations on our platform to answer those questions. They could try different models until they found what they thought their investors

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AiPEX: a closer look

To select the stocks that make up AiPEX, the EquBot AI investment platform follows a rules-based investment approach and monitors the businesses listed within the Russell 1000 index, identifying the roughly 250 companies with the highest growth potential according to its calculations.

“And it’s making those stock picks based on the insights of an entire army of what we like to call simulated AI research analysts,” says Robertson. “These simulations are working in complete coordination, so if one AI module learns something about a company, they all know it. And it’s that shared knowledge that they use to choose a portfolio of those companies best positioned for growth.”

For each of the 1,000 businesses being evaluated, these “simulated AI research analysts” assign three scores to evaluate their corresponding growth potential—a financial score, a news and sentiment score and a management score.

“For the financial score,” explains Robertson, “it’s looking at things like cost of goods sold, price to earnings ratio, revenue expenses, earnings per share. And the second score, the news and sentiment ranking, is determined by Watson as it reads the news articles and social media to see what people are saying about specific companies. Finally, the management score looks at the actions and performance of management and the C-suite of these companies as well as how they are perceived in the market.”

Since the market is always shifting, the platform recalculates these scores—and rebalances the AiPEX portfolio—each month. And to keep calculations relevant, the EquBot team continues to feed the virtual AI analysts with current market information as it becomes available.

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“We’re giving it the traditional structured data,” adds Amador. “But that’s just a sliver of the information that’s out there. Around 90% of the information we use is unstructured. And with Watson Discovery, we’re looking at around one million news articles each day in over a dozen different languages.”



Stop guessing. Start predicting.

It seems fairly evident that the EquBot AI platform is picking up on trends that humans just aren’t noticing. “Even before March 2020, which is when the market started to pull back due the pandemic,” says Robertson, “the AiPEX portfolio was already allocating into pharma and biotech as a general theme. And it focused very specifically on one of the companies that created a vaccine.”

She continues: “It was able to analyze and gain insights from that company’s FDA clinical trial documents—details that weren’t even in the US news yet. And it spotted that this business was taking the lead in the marketplace.”

Similarly, the solution seemed to predict the energy shortages and related market disruptions that took place in the second quarter of 2022. “AiPEX became significantly overweight in energy stocks back in December 2021 because it was seeing signals in the information model that instability was coming long before any sanctions were targeted against Russia. So AiPEX, which was heavy in energy, benefitted when oil jumped up 40%, while the corresponding energy sector of traditional market-weight-capped indexes—such as the S&P 500—was relatively small.”

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Investing with confidence

An immediate success, AiPEX drove over USD 250 million in product sales in its first few months and has surpassed USD 2 billion in total sales since then. And the AI-picked index routinely outperforms traditional market cap weighted indexes, out earning it by 5% annualized for the last 10 years.

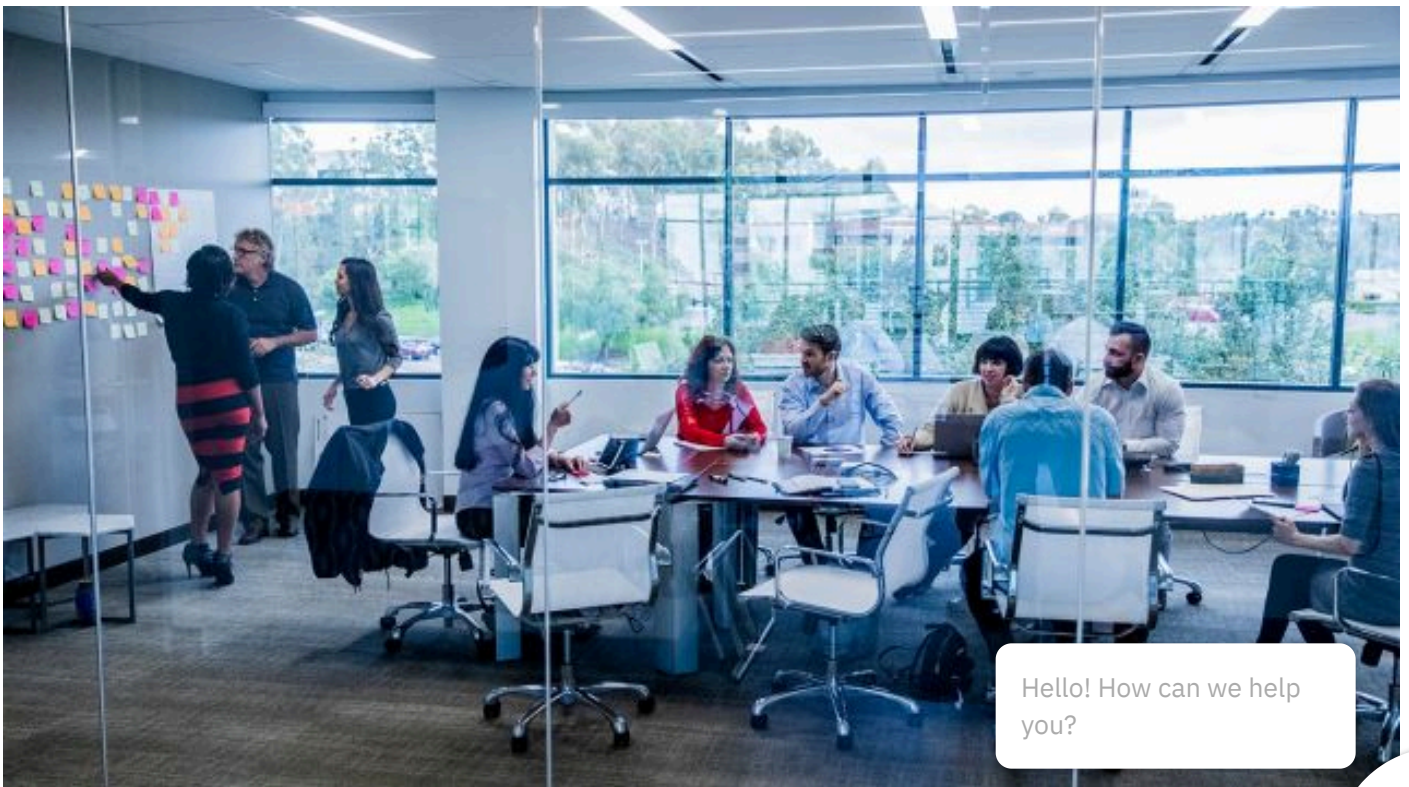
“Trust is incredibly important,” says Robertson. “And the IBM brand carries a lot of trust. So working with IBM brings a sense of credibility that helps drive our success in the market. And with the transparency of IBM and EquBot, we’ve been able to demystify AI and make the complex simple. We can clearly indicate why each stock is chosen in a way that investors can wrap their head around and get comfortable with. Because when it comes to investing, being comfortable with the investment process is critical.”

And when discussing the role of EquBot throughout the project, Robertson adds: “I can't think of any company other than EquBot that would have been able to so efficiently design the algorithm that feeds AiPEX and then present that story in a way that gets people excited about it. Their expertise combined with their storytelling and commitment to making AiPEX a success is why we're sure we made the right choice.”

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Growth potential



“This is still the super early days in applying machine learning to investment strategies,” notes Amador. “There’s USD 100 trillion of global assets out there being managed, and there’s probably under a trillion of AI machine learning types of investments. But at some point, we believe that most investment strategies will be directly or indirectly managed by AI and machine learning.”

Further exploring the market potential waiting to be unlocked, Robertson adds: “What’s next is what’s super exciting. We’ve been seeing a lot of themes come through in terms of the stocks that Watson is choosing—like cybersecurity or the future of transport. Topics that there’s a lot of buzz around. And we’re starting to look at how we can take those themes and use the AI to pull together a portfolio—a basket of stocks—that might align with them.”

“We can talk about what EquBot and IBM are doing together, but what really drives this home and gets clients excited about AI is when we can bring it to life for them,” explains Robertson. “So we’ve been hosting client events at IBM Experience Centers—we’ve done one in New York and another in San Francisco. And at these centers you can see what IBM and Watson are doing in your industry and other industries. It just gives you that full spectrum of how powerful AI is.”



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[HSBC USA, Inc.](#) (link resides outside of ibm.com) is a Maryland holding company with various subsidiaries, including HSBC Bank USA, N.A. And acting through these subsidiaries, HUSI offers a full range of traditional banking products and services to individuals, high-net-worth clients, small businesses, corporations, institutions and governments. HUSI is a wholly-owned subsidiary of HSBC North America Holdings Inc.



About EquBot Inc.

Headquartered in San Francisco, California, IBM Business Partner [EquBot](#) (link resides outside of ibm.com) develops and distributes global financial technology solutions powered by AI and machine learning. Presently, the company’s AI investment platform—delivered under a platform-as-a-service (PaaS) model — powers over USD 2 billion in investments worldwide.

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Solution components

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[IBM Watson Natural Language Understanding](#)



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