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Fast and furious:
How a high-frequency trading fund finds & tests new trading strategies

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Our client, a high-frequency trading (HFT) fund, boasts one of the world's fastest in-house trading systems, which allows them to execute millions of trades daily. They constantly search for microstructure patterns and anomalies using diverse data types in an iterative fashion to develop algorithmic trading strategies. To accelerate this research, they employ Atoti, an analytics tool that provides the research team with flexible, efficient, and scalable solutions. Once a winning strategy is identified, they can swiftly deploy the algorithm. Atoti, a solution by ActiveViam, empowers the HFT fund to investigate data of any size or complexity at speed of thought, allowing them to implement trading ideas faster and outperform their competitors.

> ## A leader in the thriving field of quantitative trading

I recently met with one of our new customers, a High-Frequency Trading Fund, to learn more about their business. How did they build one of the fastest and most comprehensive in-house trading systems in the world that allows them to place several million orders a day? Here's what I found...

> ## The constant search for microstructure patterns and anomalies

To learn about the role that Atoti can play in the development of algorithmic trading strategies, I decided to go straight to the source and interviewed one of the Quant Researchers from the trading fund. He told me how they used our product to *speed up* their research process and it was not something that I expected.

Apparently, the researcher often doesn't know what he is going to discover in his analysis, what factors he wants to deploy, and how he wants to look at the data. Quants incorporate various types of data, such as tick prices from exchanges, reference data, market news, sentiment data, and alternative data from AI models in an iterative process. That is why this customer focused on providing the research team with flexible, efficient, and scalable tools.

*"Before, quants and traders had to guess in advance what they wanted to investigate or to analyze, and then only build something very ad-hoc to do so. **Now everything is exposed and they can follow their train-of-thought to very quickly identify what was impossible to spot before.**"*

Researchers need the ability to bucket data based on the assumed patterns to backtest the performances of the proposed algorithm. There can be multiple ideas that need to get back tested before a winning strategy is identified.

Once a winner is identified, the algorithm needs to be deployed, fast.

Now the question is, how long does it take to find and validate each idea?

> Executing a winning trading strategy

Markets move fast and opportunities to capitalize on market imbalances are swiftly seized by market participants. The ability to generate more winning ideas available for execution is vital.

Deploying a trading idea into production involves several teams at the fund. After the quantitative researcher and trader have thoroughly tested the idea, ran simulations and backtesting and developed their contingency risk management strategies, the engineers pick up the algorithm for deployment and monitor high-volume trading and risks, live.

*"The full process goes from researching to spotting an opportunity or issue with the algo, finding a new idea, implementing it, backtesting, and putting it in production. **With the help of Atoti, the time to market has the potential to be reduced by a factor of three.**"*

> Our commitment as an analytics provider

Innovation is the backbone of success for the algorithmic trading team. One of our clients core values is innovation – both around the tools, data and systems, to stay ahead of the curve. This is mission-critical to any quantitative trading firm because, as they say, markets are moving fast and opportunities do not last forever.

At ActiveViam our mission is to facilitate the last mile analytics for our clients. Time is literally money in the case of this particular client. We believe that HFT fund teams should not waste their time building data processing workflows or plotting tools. ActiveViam's Atoti solution will enable you to immediately investigate data of any size or complexity at the speed of thought so that you can implement your trading ideas faster, and beat your competition.

Contact us today to schedule a demo.

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