Startup Digs Into Public Filings With GPU-Driven Machine Learning to Serve Up Alternative Financial Data Services

Intrinio offers an alternative to traditional bundled financial data products with à la carte subscription services.

Author: Scott Martin

When Rachel Carpenter and Joseph French founded Intrinio a decade ago, the fintech revolution had only just begun. But they saw an opportunity to apply machine learning to vast amounts of financial filings to create an alternative data provider among the giants.

The startup, based in St. Petersburg, Fla., delivers financial data to hedge funds, proprietary trading shops, retail brokers, fintech developers and others. Intrinio runs machine learning on AWS instances of NVIDIA GPUs to parse mountains of publicly available financial data.

Carpenter and French realized early that such data was sold for a premium, and that machine learning offered a way to sort through free financial filings to deliver new products.

The company offers information on equities, options, estimates and ETFs — as well as environmental, social and governance data. Its most popular product is equities-fundamentals data.

Intrinio has taken an unbundling approach to traditional product offerings, creating à la carte data services now used in some 450 fintech applications.

“GPUs have helped us unlock data that is otherwise expensive and sourced manually,” said Carpenter, the company’s CEO. “We built a lot of technology with the idea that we wanted to unlock data for innovators in the financial services space.”

Intrinio is a member of NVIDIA Inception , a free, global program designed to support cutting-edge startups.

With lower overhead enabled by GPU-driven machine learning for providing financial data, Intrinio has been able to deliver products at lower prices that appeal to startups.

“We have a much smaller and agile team, because a small team — in conjunction with NVIDIA GPUs, TensorFlow, PyTorch and everything else that we’re using — makes our work a lot more automated,” she said.

Its clients include fintech players like Robinhood, FTX, Domain Money, MarketBeat and Alpaca. Another, Aiera, transcribes earnings calls live with its own automated-speech-recognition models driven by NVIDIA GPUs, and relies on Intrinio for financial data.

“Our use of GPUs made our data packages affordable and easy to use for Aiera, so the company is integrating Intrinio financial data into its platform,” said Carpenter.

Aiera needed financial-data-cleansing services for consistent information on company earnings and more. Harnessing Intrinio’s application programming interface, Aiera can access normalized, split-second company financial data.

“GPUs are a critical component of Intrinio’s underlying technology — without them, we wouldn’t have been able to apply machine learning techniques to the cleansing and standardization of fundamental and financial statement data,” said Carpenter.

For equities pricing, Intrinio's machine learning technology can sort out pricing discrepancies in milliseconds. This results in substantially higher data quality and reliability for users, according to Carpenter. With equity fundamentals, Intrinio automates several key processes, such as entity recognition. Intrinio uses machine learning to identify company names or other key information from unstructured text to ensure the correct categorization of data.

In other cases, Intrinio applies machine learning to reconcile line items from financial statements into standardized buckets so that, for example, you can compare revenue across companies cleanly.

The use of GPUs and machine learning in both of these cases results in higher quality data than a manually-oriented approach. Using Intrinio has shown to decrease by 88% the number of errors requiring corrections compared with manual sorting, according to the company.

For options, Intrinio takes the raw Options Price Reporting Authority (OPRA) feed and applies cutting-edge filtering, algorithms and server architecture to provide its options API

ESG data is also an area of interest for investors right now. As retail investors are starting to be more conscious of the environment and institutions are feeling the pressure to invest responsibly, they want to see how companies stack up with this information.

As regulation around ESG disclosures solidifies, Intrinio says it will be able to use its automated XBRL-standardization technology to unlock these data sets for their users. XBRL is a standardized format of digital information exchange for business.

"On the retail side, app developers need to show this information to their users because people want to see it — making that data accessible is critical to the evolution of the financial industry," said Carpenter.

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Original URL: https://blogs.nvidia.com/blog/2022/08/18/gpu-driven-machine-learning-alternative-financial-data-services/