Headline: GenAl is democratising algo trading, but experts warn on quality and regulation risks

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Generative AI is lowering entry barriers in algorithmic trading, enabling even small firms and retail traders to crunch complex datasets and test strategies. But experts warn that poor data quality and opaque models could invite both blow-ups and tougher regulation.

Khushi Keswani September 24, 2025 / 14:39 IST



Generative AI is rapidly lowering the barriers to entry, allowing small funds and even retail quants to run strategies once reserved for the biggest hedge funds. At a recent webinar 'Algorithmic Trading Conference 2025' by QuantInsti on the future of GenAI in trading, experts said cheaper infrastructure and AI-driven data pipelines are making it possible for newcomers to

compete — though they cautioned that quality controls could decide who wins and who gets wiped out.

Democratisation may bring more players into the game, but industry experts question if it will also unleash instability? One of the ideas is that if small desks can now wield hedge-fund-grade tools, markets could see sharper competition — and sharper blow-ups.

"Large language models are a compression of the world's knowledge," said Peter Cotton, Chief Technology Officer at Global Strategic Minerals Corp. "It's a terrific time for traders willing to probe this strange new database. Small funds can now explore corners of the market that bigger players may miss."

For Matteo Campellone, Chairman and Head of Research at Brain, the shift is not just theoretical. "These tools give small groups a chance to research and try new strategies and be more competitive," he noted. "In the past, such ideas would not have been feasible because the funds would have been too small."

The biggest tailwind is falling costs

"You can rent a GPU by the hour and get things going," pointed out Faisal Mohammed, Vice President of Trading Operations at Zerodha. "Startup budgets for AI desks are now in the tens of thousands of dollars, not millions." He added that nearly 70 percent of quant researchers' time goes into cleaning data — a task that AI can increasingly automate, freeing them to focus on strategy.

Mohammed added that cloud rentals give newcomers a low-risk way to experiment, but as teams scale, they may need to build custom infrastructure or train specialized models — a choice that will increasingly define competitive positioning.

That edge is now available to the smallest desks, said Dimitri Bianco, founder of Fancy Quant. "For years, alternative data was out of reach for retail and small firms because of the cost. With AI, you can take unstructured sources, summarise them, convert them into usable formats, and run models on them. That creates an edge that wasn't possible earlier."

Backtesting in the age of Al

But democratization also sharpens old headaches. Campellone stressed the importance of "point-in-time" datasets that preserve what information was available when, so backtests don't accidentally use future data. His firm freezes LLM-driven datasets at regular intervals for this reason.

Cotton countered that building true point-in-time LLMs is still impractical. "You'd need to retrain retro models over and over, which is prohibitively expensive," he said. The gap leaves small funds particularly exposed to hidden data leakage when they test new ideas.

The explainability divide

Another flashpoint was explainability. Cotton argued that fears are overblown if risks are properly bounded. "Markets already live with plenty of black boxes. As long as you control exposure, unexplained signals can still add value," he said.

Bianco disagreed sharply. "Without explainability, you're gambling. The first time an Al-driven blow-up happens, regulators will step in. Transparency and validation aren't optional — they're survival."

A one-person revolution, or a governance trap?

Campellone cautioned that AI pipelines shouldn't be left to a single individual in a small firm. "The temptation is there, because one person can do a lot now. But that's risky — you need accountability for data quality and coherence," he said. Bianco agreed, stressing that without proper validation, AI-led models could easily overfit.