

Citadel Securities hires 20-year Microsoft vet in a new tech leadership role

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- **Citadel Securities hired Herb Sutter who spent 20 years at Microsoft.**
- **Sutter is an expert in C++, a coding language that underpins most of Citadel Securities' technology.**
- **He'll lead the firm's C++ training initiatives to make the complex language more accessible.**

Citadel Securities just hired a 20-year Microsoft veteran who will be tasked with helping developers master a crucial but complex coding language to supercharge productivity.

Herb Sutter is joining Ken Griffin's market maker as a technical fellow on Monday, Business Insider has learned. Sutter specializes in a programming language called C++, which underpins much of Citadel Securities technology, including its trading system that handles one in four stock trades in the US.

In a newly created role as a technical fellow, a title that typically distinguishes top engineers and technology thought leaders, Sutter will lead the market maker's C++ training initiatives, Josh Woods, Citadel Securities' chief technology officer, said in an internal memo to employees viewed by BI.

"Herb is widely recognized as one of the most prolific experts, authors, and educators within the C++ community," Woods said in the memo.

At Citadel Securities, C++ is deeply ingrained into the firm's tech fabric as its primary coding language used by hundreds of engineers and quantitative researchers.



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Herb Sutter is joining Citadel Securities as its first technical fellow.

Sutter's trainings will focus on how to actually build software and efficiently fix issues. As the firm gears up for expansion into new products and geographies, it is taking steps to further strengthen its technology to be able to handle the expected scale and complexity. Improving its use and understanding of C++ can influence how it designs systems to be faster and cut down on unintentional coding mistakes.

In addition to driving C++ initiatives at Microsoft, the Canadian-born technologist has chaired two important groups that oversee the development and promote best practices of the coding language for programmers around the world. In those leadership roles, he has

shaped the direction and future of C++.

What is C++ and why does it matter to Citadel Securities

Humans use coding languages to communicate with computers by providing a set of instructions for a system to execute. Many kinds of coding languages are used on Wall Street, from more general-purpose languages like Python and Java to more specialized ones like SQL, which are used heavily when working with data and databases. If a company needs speed, there's a good chance you'll find C++.

C++ is often used at high-frequency trading firms and exchanges, where companies gain an edge by being microseconds faster than the competition. It's known as a low-level language that gives engineers more control over how systems work under the hood. But with that control comes more complexity and opportunities for problems.

C++ coders have more control over computer hardware and memory. This level of control is similar to how drivers of manual cars can adjust engine settings and time when they shift gears for maximum performance versus automatic-car drivers who don't have to worry about operating the clutch or messing with the gears.

Just like manual drivers can stall out if the clutch, gas pedal, and gear shifter don't work in unison, having that low-level control between hardware and software can lead to thorny issues that aren't always straightforward to resolve.

Though C++ has been around for decades, it's constantly being evolved and adapted to make it more powerful and accessible.

"C++ is critically important to our business and the capital markets, and I'm excited by the opportunity for us to work with Herb and the C++ community to continue to evolve the language, particularly in the areas of ease of use and safety," Woods said.