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In This Battle Arena, Warriors Are Armed With Algorithms

By **ALEXANDRA STEVENSON**
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Tim Harrington, a co-founder of BattleFin, a recruitment firm for hedge funds.Credit Suzanne DeChillo/The New York Times

Michael Chang, 30 years old, is the sort of guy that BattleFin, a recruitment firm searching for hedge fund talent, wants to attract.

Six years ago, at a Foxconn plant in Guangdong, China, Mr. Chang used data analysis to figure out that the unusually cold weather outside had led to a high failure rate of the computer chips on the factory floor. The finding saved the company from significant revenue losses.

Today, he runs a hedge fund in Cambridge, Mass., that analyzes not only weather, but news and shipping reports, to make investment decisions.

To find more math whizzes who can apply their knowledge of other fields to the financial world, BattleFin's co-founders, Tim Harrington and Brian Tomeo, have created a start-up that they hope will grow into an incubator that organizes finance tournaments and provides capital to "give the little guys a chance."

“By creating a tournament, we’re able to find these guys who are not on the radar screen of the larger seeders,” Mr. Tomeo said.

Hedge funds have long sought out super brains who could apply mathematical concepts to financial markets. The “quant” approach was made famous in the 1970s by Robert C. Merton, Fischer Black and Myron S. Scholes. Their Black-Scholes model, which predicts the future value of stocks and bonds, spawned the growth of hedge funds.

Michael Chang, left, and Zeid Barakat of the hedge fund Flyberry Capital.Credit Bryce Vickmark for The New York Times

But the models were far from perfect. In 1998, the hedge fund Long-Term Capital Management failed to factor in the possibility of a Russian government debt default, and when its highly leveraged bets soured, the firm nearly brought the global credit market to the brink. Again in August 2007, hedge funds that relied heavily on quant models — AQR Capital Management, D. E. Shaw and Renaissance Technologies among them — suffered huge losses in one week as the housing market began to collapse. Because their models were so similar and the firms had such big positions, their losses were amplified.

Mr. Harrington, 37, whose career includes working at JPMorgan Ventures and Sigma Capital, and Mr. Tomeo, 41, who worked atJPMorgan for 13 years, want to find data scientists who can build models that predict these types of swings.

To pay for their tournaments, now in their second year, they find investors on the lookout for new talent. The prize money is determined by how much someone is willing to invest. BattleFin, which has offices in New York and Miami, then takes a recruitment fee of $5,000 to $15,000.

In the latest BattleFin competition, called the Big Data Combine, 382 teams from 43 countries have been given a data set of stock market prices with some closing prices missing. Using this and a series of external “clues” — news that could affect stock price movements — the players build a predictive model.

For many of the contestants, finance was not on the radar. To find them, BattleFin teamed up with Kaggle, a Web community of number crunchers hungry for data sets and up for a challenge, and RavenPack, a provider of sophisticated market data.

Corey Chivers, a Ph.D. candidate in computational ecology atMcGill University in Montreal, is one contestant. In his academic work, he is trying to predict the growth pattern of invasive species. In his spare time, Mr. Chivers likes to enter data competitions much as other people like to do crossword puzzles.

“I’m easily distracted by any data program,” Mr. Chivers said.

Brian Tomeo, a BattleFin co-founder.Credit Mayra Roubach

The fact that some contestants have no background or interest in finance does not faze BattleFin’s co-founders.

“What we’re trying to do is figure out which people we can work with to make very interesting predictions with large data sets,” Mr. Tomeo said.

On Oct. 25, 12 finalists will be flown to Miami for a showdown, where Matt Iseman, the host of the NBC show “American Ninja Warrior,” will be the M.C. of the event. The top five finishers will split $10,000. The first-place finisher will get half of that, $5,000, and the opportunity to turn the winning predictive model into a strategy using sophisticated testing software. If the strategy is successful, BattleFin will help license the strategy to a hedge fund.

BattleFin’s approach has already met with some success.

Mr. Chang, the former Foxconn factory manager, for example, won the first BattleFin hedge fund contest. He ended up at M.I.T. after Foxconn sponsored his Ph.D. in electrical engineering there as a reward for his work. Mr. Chang said his interest quickly turned to finance. “The finance world has the strongest hunger for data and information,” he said.

He now manages more than $5 million through Flyberry Capital, a hedge fund he co-founded with a fellow M.I.T. student, Zeid Barakat.

Mark Angil, 48, is a more recent BattleFin winner. He started his career as a nuclear propulsion officer in the Navy and, through a career sidestep, ended up in Silicon Valley during the heady days of the technology boom.

“The golden ’90s in Silicon Valley was insane,” Mr. Angil said. “It was hard not to get bit by the market bug.”

Mr. Angil set up a hedge fund called RBD Adaptive in 2009, to manage money from friends and family. After gaining some publicity through the BattleFin tournament, he has attracted money from new investors. He now manages around $2.7 million, he said.

Mr. Chang and Mr. Angil manage less money, of course, than what many hedge fund titans make in fees in one year. But they see it as a start at a time when finding capital has become harder for fledgling hedge fund managers. Heavyweights like Bridgewater Associates, which manages $150 billion in client money, are becoming bigger while the smaller guys are being squeezed by the high costs of legal compliance.

Patrick Wolff, 45, knows the hurdles well. After working for Peter Thiel's Clarium Capital for five and a half years, Mr. Wolff, a former chess grandmaster, struck out on his own. Mr. Wolff started Grandmaster Capital with $50 million in seed capital from Mr. Thiel three years ago. It has grown to $200 million today.

"I think you can launch a fund of our size and bootstrap it," he said. But, he added, "compared to the last decade, there is a sense that it's less of the go-go years and more in the nose-to-the-grindstone years."

Still, even the big hedge funds have a difficult time finding talent.

"Everyone is trying to figure this out and make it more analytical," said Darcy Bradbury, a managing director at D.E. Shaw.

The company sponsors a handful of competitions, including M.I.T.'s annual Battlecode competition for undergraduates and a robotics competition at one of New York's most prestigious public schools, Stuyvesant High.

"We like to cast the net wide and in areas where people may not think about finance," said Aaron Kirchner, D.E. Shaw's director of recruitment.

But if talented people are not scooped up by a big firm, they face an uphill battle. BattleFin's tournaments have helped raise the profile of hedge fund hopefuls, but they do not address the biggest hurdle of finding capital.

"It shouldn't be hard, but it has become more a world of haves and have-nots," said Scott Roth, who shut down his $350 million hedge fund Severn River Capital Management this year after a few years of lackluster performance. "It's harder for the guys that start up in this environment."

He added that it might end up being "just the traditional players that can do this kind of thing."

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