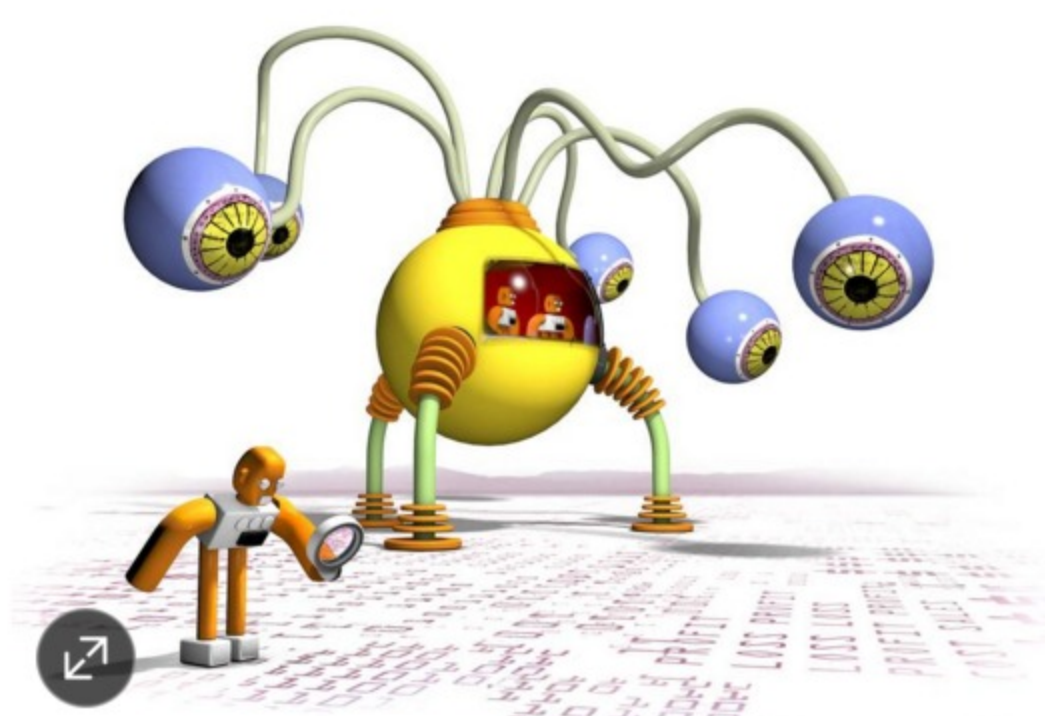




Software Is Disrupting Venture-Capital Sector

CircleUp's Classifier shows algorithms now play bigger role in prescreening investments



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Ten years ago, bored by the repetitive nature of his work as a private-equity analyst, Ryan [Caldbeck](#) began to think that the job could be done as well by software. Today, he's the co-founder and chief executive of CircleUp, [an online crowdfunding platform](#) specializing in consumer-goods companies—think food, cosmetics and chain restaurants. Mr. [Caldbeck's](#) firm has built software that he says does more or less what he once found so stultifying.

Internally, this software is called the "Classifier." It applies so-called machine learning to a pool of big data: more than 10,000 evaluations over four years by CircleUp's human analysts.

The software has been prescreening investments for analysts since March 2014. The result is much higher deal flow. Fewer than 10 analysts collectively evaluate 500 potential deals a month, says a CircleUp spokeswoman. By comparison, a typical private-equity firm evaluates fewer than 500 deals in a year.

During the prescreen, the Classifier crunches a candidate company's financial data: revenue, growth, margins, distribution channels and the like. Other sources are also thrown into the mix, including data from market-research firm Nielsen and quantitative measures of reach and activity on social media, for a total of 92,000 data points per company, says Mr. [Caldbeck](#). Then the machine decides whether the company merits further evaluation by human beings.

The Classifier is nowhere close to fully automating the process of investing in private companies. And compared with the tools available for public markets—software-driven hedge funds like Renaissance Technologies, or robo advisers for individual investors like [Wealthfront](#) and Betterment—CircleUp's software is primitive.

But CircleUp's effort exemplifies a larger trend in finance, where algorithms play a growing role in markets for areas as diverse as startups and real estate. Software is eating the world, again, only this time it threatens the jobs of precisely the financiers accustomed to disrupting everyone else.

One reason CircleUp could build its Classifier is that the companies in which it organizes investments tend to have very similar business models. The food companies, for example, generally sell similar types of products into grocery stores with nearly identical requirements.

The company's software wouldn't work in tech, says Rory [Eakin](#), CircleUp's other co-founder and chief operating officer. The business models of tech startups vary widely, and those companies can tap a robust network of incubators and venture capitalists. "I don't think there's a problem to be solved in tech investing, but if you have an organic-kale-chip company and you're reinventing the salty-snack category, there's no ecosystem to fund that," says Mr. [Eakin](#).

One such kale-chip maker is Rhythm [Superfoods](#). It was first evaluated by the Classifier, accepted into CircleUp, and is now in 5,000 U.S. stores. On the strength of that growth, the company netted a [financing round of \\$3 million, led by General Mills](#).

A challenge to further automating the assessment of private companies is a lack of publicly available data. In general, only potential investors get to see a private company's financials.

Once such data is collected, however, there might be other uses. Alexander [Mittal](#), CEO of FundersClub, one of the first online investment marketplaces where accredited investors could pool their money in private deals, says his team is analyzing its four years of data to assess which investors on FundersClub are best at judging companies, as evidenced by how their investments perform.

Using software to pick the humans who are best at picking startups certainly seems like a baby step toward automating the investment process. By analogy, think about how Google's algorithm started out using signals from humans—how often Web pages linked to one another—to pick the most relevant pages and has since become more automated.

There's an irony here: CircleUp, which is to some extent trying to disrupt traditional venture capital, is itself funded by venture funds including Union Square Ventures, Canaan Partners and Google Ventures. That isn't lost on CircleUp investor Andy [Weissman](#) of Union Square Ventures, who jokes that "our hope is that CircleUp will put us out of business."

The complexities of identifying successful tech companies will probably keep Mr. [Weissman](#) safe for the foreseeable future. Still, the truth is that CircleUp and companies like it could eventually take a chunk out of the profits earned by private investors.

It is possible, in other words, that the Warren Buffett of the 21st century will be an artificially intelligent software program.

There are also many categories of private investments that might yield to this same approach, especially in debt financing for segments like agriculture or industrial machinery. This is, after all, what [Lending Club is trying to do for consumer debt](#).

Meanwhile, CircleUp's Classifier is simply making the human analysts the company employs more effective. Even in the relatively straightforward world of investing in consumer goods, people aren't out of the loop—yet.