



HFS Hot Vendor: SigOpt

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Introduction

The HFS Hot Vendors are an exclusive group of emerging players, each with a differentiated value proposition for the HFS OneOffice or HFS OneEcosystem. HFS analysts speak with numerous exciting startups and emerging players.

We designate a select group as HFS Hot Vendors based on their offerings' distinctiveness, ecosystem robustness, client impact, financial position, and the impact in our OneOffice and/or OneEcosystem Frameworks. The HFS Hot Vendors may not (at the time of writing) have the scale and size to be featured in our Top 10 reports, but they have the vision and strategy to impact and disrupt the market.

Author: Reetika Fleming

HFS first wrote about automated data science last year, calling out the need to improve the data science lifecycle to make tasks cheaper, faster, easier, and, increasingly, autonomous and self-remediating. Business leaders should prepare for automated data science to become commonplace—not necessarily as a way to entirely replace data scientists but to significantly boost their capabilities. This is where San Francisco, CA-based startup SigOpt’s capabilities shine. In the five years since its founding, SigOpt has helped its clients get the most value out of their AI investments by providing a way to tinker with their ML models at scale to make them more effective.

SigOpt’s solution plugs into the data science model-development lifecycle at the experimentation stage of hyperparameter tuning and automates the tuning of a model’s hyper, feature, and architecture parameters. This stage of fine-tuning a machine learning (ML) model can sometimes result in significant performance gains, but it can be a time-consuming and ultimately fruitless exercise for data scientists. Most teams are unable to dedicate a lot of time and resources to this step, despite its potential for model improvement.

That makes it a perfect candidate for automation. As SigOpt’s co-founder Scott Clark found during his research, this seemingly endless treasure hunt could be better solved mathematically.

SigOpt built APIs that most data science workflows and platforms can integrate with easily. Its technology promises results: faster model tuning anywhere from 10x to 100x, cost savings from more efficient computational crunching, and better performance results than other tuning approaches. SigOpt’s clients swear by the company and are particularly vocal in the market to endorse the startup as one of the underlying reasons for their AI success. During our research, one of SigOpt’s clients said, “We have internal approaches for model tuning, but we found SigOpt to be a really powerful solution that integrates with all our systems, with their approach of focusing on black-box tuning instead of some all-encompassing modeling solution. Through our analysis, we’ve found them to be the best solution out there for what they do.”

HFS' take

SigOpt has specifically chosen the automation of hyperparameter optimization as its core purpose. The focus makes its usability and plug-and-play functionality extremely compelling for companies across all industries that are seeking better ROI from ML models. The company's API-based business and consumption model is particularly suited for data sciences teams where enterprises may have already developed their own in-house platforms or have various tools and workflows already in place for AI model development. As one client mentioned, "We try not to be too prescriptive about what technology platforms our modelers use. It's nice when we find solutions that aren't giant frameworks that you need to be all in for...SigOpt plugs in nicely and delivers results for us."

The challenge for SigOpt is to find those organizations that are mature enough in their AI journey to be ready for a more efficient hyperparameter tuning capability. The more mature a company's data and AI capabilities are, the more value you can get from a solution like SigOpt. The company admits that it attracts more mature practitioners, especially enterprises that have invested in developing their own modeling platforms but may not necessarily hire large teams to optimize models. As our research has shown time and again, the enterprise AI market is not mature by any means, meaning SigOpt will have to wait for critical mass while it continues its work with those further along and in need of its technology. The company will also need to extend its partnership base to more machine learning platforms to expand its reach as the market for automated ML platforms proliferates for enterprise use.

Vendor factsheet

- SigOpt was co-founded in 2014 by Scott Clark (CEO) and Patrick Hayes (CTO)
- SigOpt has two offerings, one for enterprises and a free version for qualifying academics or nonprofits. The company has enabled the research of thousands of academics through this program
- SigOpt has raised \$8.7 million in total funding, with a Series A as the most recent funding round. Investors include Andreessen Horowitz, DCVC, Y Combinator, SV Angel, Blumberg Capital, and In-Q-Tel
- The company was featured on CNBC in its 2018 list of 100 promising start-ups to watch

Solution portfolio

SigOpt accelerates the impact of experimentation on machine learning, deep learning, simulation, and other AI models using automation. Its API-enabled experiment management and hyperparameter tuning solutions are critical for any team building a modeling platform or scaling their models in production.

Industry coverage

SigOpt has customers across finance, trading, government, technology, and AI services. In particular, SigOpt has found significant success with 'algorithmic trading' customers, working with asset managers representing over \$300B in assets under management. Notable clients include Two Sigma, In-Q-Tel, Carbon Relay, Tower Research Capital, and Hotwire.

Partnerships

SigOpt has partnerships with Amazon, Google, Intel, NVIDIA and other leaders in AI, machine learning, and data science.



About HFS

Insight. Inspiration. Impact.

HFS is a unique analyst organization that combines deep visionary expertise with rapid demand side analysis of the Global 2000. Its outlook for the future is admired across the global technology and business operations industries.

Its analysts are respected for their no-nonsense insights based on demand side data and engagements with industry practitioners.

HFS Research introduced the world to terms such as “RPA” (Robotic Process Automation) in 2012 and more recently, the HFS OneOffice™. The HFS mission is to provide visionary insight into the major innovations impacting business operations such as Automation, Artificial Intelligence, Blockchain, Internet of Things, Digital Business Models and Smart Analytics.

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