Case Study - Spring Venture Group

Johnny Hilgers
VP of Business Analytics
Spring Venture Group

Company

spring venture group

Spring Venture Group is an inside sales and marketing company with product offerings in the areas of Health and Life Insurance.

Use Case
SVG uses ScienceOps to expose their lead scoring models to external insurance lead vendors' APIs. Prior to ScienceOps, SVG used MLaaS software.

Results
60 models deployed
25% lift in close rate

"We used Machine Learning as a Service (MLaaS) software for a year, and loved it. I thought it was exactly what we needed until I realized that the models I was writing on the side were better than the ones we had in production."

What Johnny reffered to as Machine Learning as a Service software professes to make machine learning so simple that even a ML novice can click and point their way to a predictive algorithm that will help their company make smarter, data-driven decisions after only a few weeks of training.

"The specific MLaaS we were using was limited to one type of algorithm: tree-based models composed of a single decision tree or an ensemble of voting trees including the flexible and powerful Random Forest algorithm. You would upload a .csv, transform the inputs to your desired data types, then tweak what hyper-parameters you had access to. After the model was built you could click through the trees to see what they were splitting on, evaluate the model on your holdout set to see how it performed, then provide the API endpoint for IT to call.

"It worked pretty well at the beginning. We saw an immediate lift from applying machine learning to our lead buys, but we realized after a few months of experimentation that we were just scratching the surface of what ML could do.

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"We started prototyping new algorithms "from scratch" that our software setup wasn't able to generate. We even test-drove another MLaaS provider, but ultimately the best models were the ones we had the freedom and flexibility to write ourselves.

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"Unfortunately once we'd written these new and improved models, we had no way of handing them off to the IT folks to connect to web applications. In the case of our lead bidding models, the IT team needed to expose the models to our lead vendors' APIs.

"I came across Yhat on Twitter one night as I was browsing a machine learning thread. I saw a tweet about a company using ScienceOps to deploy models without any manual recoding, and I thought, "that's exactly what we need!"

> **"ScienceOps has given us the ability to put any machine learning algorithm or combination of algorithms directly into production via a REST API endpoint."**

"ScienceOps has given us the ability to put any machine learning algorithm or combination of algorithms directly into production via a REST API endpoint. It bridges the divide between the data science and IT teams, allowing the data science team to focus on building better predictive models while IT handles the API layers.

"Our data science team is building vastly better models now. ScienceOps has been the missing link in our quest for the automation of machine learning. We have written some really sophisticated python scripts that when strung together formed all the necessary steps for getting a model production-ready: pulling in training data from our database, functions for data transformation and feature engineering, then finally grid searching and cross validating across the different combinations of features, algorithms, and hyper-parameters to select the best model for the job. From there comes the easiest part: deploying our models to ScienceOps. All of this can be done with the simple execution of one shell script, something that just couldn't be done using MLaaS.

> **"All of this can be done with the simple execution of one shell script, something that just couldn't be done using MLaaS."**

"We've seen a 25% lift in close rate since purchasing ScienceOps and our targeting has never been better. We've already deployed 60 models into production. And this is just the beginning. So far it has been very, very promising."

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Spring Venture Group is an inside sales and marketing company with product offerings in the areas of Health and Life Insurance. What makes SVG a unique organization is their emphasis on providing high quality marketing and leads to their sales advisors so that they can focus all of their efforts on being productive on the phone.

www.springventuregroup.com

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Yhat (pronounced Y-hat) provides a comprehensive platform for hosting and deploying your data science model portfolio. Any R or Python model hosted on ScienceOps can be called via a secure and encrypted REST API endpoint, using either the live (real-time) or streaming (batch) interface. ScienceOps can be installed on-premise or in the cloud.

Yhat also created Rodeo, an app for making it easier to use Python.

www.yhat.com

Address
45 Main Street
Suite #707
Brooklyn, New York
11201

Email
info@yhathq.com
support@yhathq.com

Phone
(718) 855-2107

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