IBM

SmarterData
Be Relevant.

Business challenge

To help its clients navigate the uncertainties of the digital-age retail industry, SmarterData wanted to find new ways to provide relevant, actionable, data-driven insights into consumer behavior.

Transformation

SmarterData uses IBM Analytics for Apache Spark to deliver intelligent applications which combine operational and contextual data to help retailers understand consumers' behavior and desires.

**Ram Himmatraopet
Founder & CEO
SmarterData**

Business benefits:

Empowers
retailers with data-driven insights into consumer behavior, helping drive sales

Helps
in-store teams provide smarter customer service based on real-time analysis

Leverages
contextual data to predict individual needs and create personalized offers

SmarterData
Helping retailers redefine practices for the digital age

Based in San Ramon, California, Smarter Data, Inc. leverages advanced data science technologies – predictive and prescriptive analytics – to help companies achieve relevance with their customers both online and in a retail environment, and manage the demands of digital-age business challenges.

"Using IBM Analytics for Apache Spark, we can now give in-store teams valuable insight in seconds."

Ram Himmatraopet
Founder & CEO
SmarterData

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Remaining relevant in the digital age

As the online retail sector continues to grow, many traditional retailers find themselves struggling to keep pace. In today's digital economy, companies of all shapes and sizes must both manage and exploit digital transformation in order to survive.

Ram Himmatraopet, Founder & CEO of SmarterData, says: "Our tagline is 'be relevant' – we help companies that are struggling for relevance in today's ultra-competitive retail market. Today, you can't just rely on consumers to come to your store and pick what they want. Online retailers make life easier for consumers because they proactively offer relevant products to each customer. And the key to the success of that approach is an effective big data strategy.

"We help retailers extract value from the huge volumes of data that their existing systems are already recording. While these data-sets are often 'noisy', if you use the right techniques and technology, it is possible to extract valuable insights into consumer behavior.

"Armed with this information, our clients have the ability to drive sales, increase customer loyalty and boost revenues through targeted promotions and personalized marketing campaigns."

To help clients stay relevant in the fast-paced, omni-channel digital retail industry, SmarterData offers a range of predictive and prescriptive analytics services – including innovative mobile apps that help consumers find products, and retailers gain real-time insight into store operations.

Accelerated analytics

After evaluating solutions from a number of vendors, SmarterData selected IBM® Bluemix® as the development and deployment platform for its analytics applications, and IBM Analytics for Apache Spark, IBM's managed Spark service for big data analytics. The fully managed Spark service simplifies Spark operations, and also integrates with a rich ecosystem of other cloud data and analytics services, as well as third-party tools, on the Bluemix platform.

Ram Himmatraopet elaborates: "The Apache Spark framework supports a wide range of databases and programming languages, and is specifically tuned for big data. Seamless integration with IBM Bluemix means that instead of running several different point solutions, we have a single analytics landscape. Now we can put all our clients' data into Apache Spark and analyze it with the most appropriate tools."

For example, SmarterData has developed a consumer-facing app that makes product recommendations that are not only based on purchase history, but also draw contextual data from third-party sources, such as The Weather Company.

This contextual data makes it possible to deliver offers that might particularly appeal to consumers in a particular situation: for instance, if severe weather conditions are predicted in a particular town, the app might recommend wet-weather clothing, or the kinds of provisions that people tend to stock up on when the weather is bad.

"Using IBM Analytics for Apache Spark, we can take diverse sets of data and perform analytics that are not just relevant to a consumer's personality or purchase history, but also to their specific circumstances at the time of the offer," says Ram Himmatraopet. "This kind of localized, specific analysis can help traditional retailers connect with their customers in a much more meaningful way, compared to the impersonal experience of shopping online."

He adds: "IBM Analytics for Apache Spark makes it easy for programmers to focus on developing these algorithms without having to worry about the underlying infrastructure. What's more, the IBM Bluemix platform provides a lot of pre-built services, such as Watson Natural Language Processing (NLP), that we can integrate as and when we need them.

"As a quick demo, we built a pizza-ordering app that allows users to specify the type of pizza they want, when they want it delivered, and so on – simply by interacting with a chat bot in natural language."
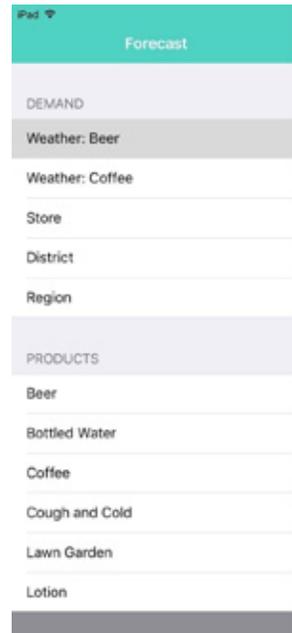
To complement its consumer-facing mobile app, SmarterData has also developed a retailer-facing app that provides a range of useful insights to in-store employees and store managers, helping them make instant, evidence-based decisions on everyday questions about promotions, inventory, product mix and other important topics.

"The idea is that analytics isn't just for the C-level executives – it should be embedded in every employee's daily role," says Ram Himmatraopet.
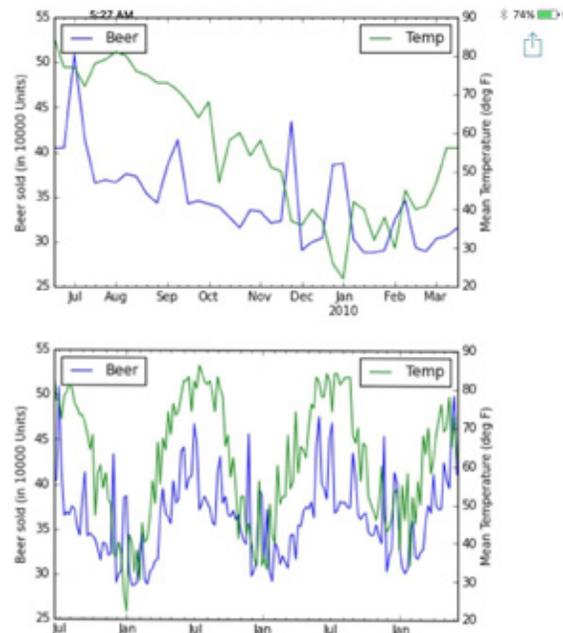
"Our app aims to empower the in-store teams and help them be more productive. Again, this requires an ability to process a wide array of different internal and contextual data-sets, and deliver the results in real-time, so that people can act on them instantly.

"And once again, IBM Bluemix and IBM Analytics for Apache Spark are the key to delivering this level of performance and flexibility."

That performance and flexibility is due to Apache Spark's design; it is extremely fast, much faster than existing data technologies. The Apache Spark framework also unifies data processing and analytics regardless of where data sits.

If a customer combines the power and extensibility of Spark, with a managed Spark service, this approach takes out the complexity of administering and operating an Apache Spark cluster, which means less maintenance and less effort, giving IT teams more time to focus on analytics and application design.

Giving clients the tools for success

With a powerful, high-performance platform for big data analytics in place, SmarterData can now concentrate on developing applications that give clients the data-driven insights they need to thrive in the increasingly digital-focused retail industry.

Ram Himmatraopet comments: "For example, the power of IBM Analytics for Apache Spark enables our retail solutions to rapidly correlate point-of-sale data with weather data, and identify if the weather had an influence on sales of specific products.

"This kind of analysis tells us, for example, that sales of beer increase if the temperature is between 45-65ºF, while sales of soup increase if the temperature is between 30-45ºF.

"These insights help retailers gain a much deeper understanding of why things happen. For example, they can work out whether their recent soup promotion was successful because it was a smart campaign, or whether the main factor was simply that the weather was cold and people would have bought soup anyway!

"Ultimately, our apps help clients make the right business decisions to stay relevant to their customers.

"With IBM's managed Spark service, IBM Analytics for Apache Spark, although our algorithms may be very sophisticated and operate on a large amount of data, we can still present the results back to the user in real time, giving them the scope to adjust operations in minutes when new challenges or opportunities arise."

He concludes: "With IBM Analytics technologies, we can build and run advanced analytics applications quickly and easily, enabling clients to unlock the value of their data."

Solution components

- IBM® Analytics for Apache Spark
- IBM Bluemix®

Take the next step

To learn more about products, services and solutions from SmarterData, please visit www.smarterdatascience.com

IBM Cloud Data Services offers a complete portfolio of data and analytics services providing unique and seamless product integrations to build apps faster and gain new insights easier with flexible deployment and pricing options. For more information about how IBM Cloud Data Services can help businesses solve tough big data problems rapidly and cost-effectively, please visit ibm.biz/clouddataservices.

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