Top Five High-Impact Use Cases for Big Data Analytics

You’ve been collecting data for years. Learn how to use it to grow your business and gain a competitive edge.
Today's data-driven companies have a competitive edge over their peers. How? They are generating breakthrough insights by bringing together all of their structured and unstructured data and analyzing it together – all at once.

The fact is, when you can analyze a large amount of data as a single data set – rather than as separate silos – you can uncover significant insights that would be impossible to get from traditional business intelligence. And it's these breakthrough new insights that are giving companies a serious competitive advantage.

But getting to these insights quickly requires moving beyond the limitations of traditional enterprise data warehouses (EDWs) and business intelligence (BI) software, which pose significant limitations. First, it can take a great deal of time to collect, prepare, and analyze all of your fragmented and often unstructured data. Second, most line-of-business professionals have to rely on IT to gather the data and organize it in a data warehouse – a prerequisite for using traditional business intelligence. And often, by the time the data is ready, the business needs have changed or it's too late to aid in decision making.

And third, traditional EDWs were simply never designed to analyze today's big data – which is a critical source of new kinds of insights that have never been available before. This data is often unstructured data from new sources like social media, web, machine sensors, mobile interactions, and call center calls. EDWs can't handle unstructured data – and any attempt to structure it in tables limits its potential value as a source of insight. You know you have big data when it's so large and complex that it's hard to process using your existing data management tools or traditional data processing applications. This could mean having petabytes of data from various resources.
The Answer: Big Data Analytics

At a high level, big data analytics solutions address these challenges head on. Big data analytics is the key to unlocking the insights from all your data types, as it enables you to analyze all of your structured, semi-structured and unstructured customer data together. It’s powerful because it enables you to combine, integrate and analyze all of your data at once – regardless of source, type, size, or format – to generate the insights needed to address a wide range of business challenges.

Datameer Helps You Get Insights from Big Data Analytics Faster

Datameer has helped hundreds of companies gain significant competitive advantage by leveraging big data to get new insights they never had before. We make big data analytics so simple that anyone can use it to turn big data into valuable, timely insights. There’s no need for a data scientist to model, integrate, cleanse, prepare, analyze and visualize your data. We provide a one-stop-shop for getting all your data types into Hadoop; quickly analyzing that data; and visualizing your results using wizard-based data integration, point-and-click analytics, and drag-and-drop visualizations.

Datameer gives you everything you need to integrate, analyze, and visualize all your data quickly and cost effectively. We support every step in the analytics process, empowering you with:

- 55+ out-of-the-box connectors and a file parser to integrate any data
- 250+ pre-packaged data algorithms in a simple-to-use spreadsheet interface
- Join and enrichment functions
- Tools to support visual data wrangling
- Self-service schema on read capabilities (eliminating the need for ETL and static schema)
- 30+ visual widgets plus free-form infographics for stunning visualizations
- Clustering and decision tree function to segment customers
- Behavior and time series analytics

Based on our experience working with customers on over 240 deployments, we have identified the top five use cases of big data that drive the greatest business value. You’ll see why customers are realizing significantly greater operational efficiencies, higher revenue, lower costs, more innovative products, and more – and why Datameer’s big data analytics solutions can help you get insights from big data analytics faster.

Now you can ingest, cleanse, prepare, analyze and visualize all of your data in hours or days, not months.
Customer Analytics

As a CMO, digital marketing, or customer loyalty executive responsible for optimizing customer acquisition and loyalty campaigns, you need greater visibility into the customer buying journey. Why? Because deeper, data-driven customer insights are critical to tackling challenges like improving customer conversion rates, personalizing campaigns to increase revenue, predicting and avoiding customer churn, and lowering customer acquisition costs.

But consumers today interact with companies through lots of interaction points – mobile, social media, stores, e-commerce sites, and more – which dramatically increases the complexity and variety of data types you have to aggregate and analyze. Think Web logs, transaction and mobile data, advertising social media and marketing automation data, product usage and contact center interactions, CRM and mainframe data. And even publicly available demographic data. When all of this data is aggregated and analyzed together, it can yield insights you never had before – for example, who are your high-value customers, what motivates them to buy more, how they behave, and how and when to best reach them. Armed with these insights, you can improve customer acquisition and drive customer loyalty.

Big Data Analytics at Work

Big data analytics is the key to unlocking the insights from your customer behavior data – structured and unstructured – because you can combine, integrate and analyze all of your data at once to generate the insights needed to drive customer acquisition and loyalty. For example, you can use insights about the customer acquisition journey to design campaigns that improve conversion rates. Or you can identify points of failure along the customer acquisition path – or the behavior of customers at risk of churn – to proactively intervene and prevent losses. And you can better understand high-value customer behavior beyond profile segmentation (for example, what other companies they shop from, so you can make your advertisements even more targeted).
How Datameer Delivers Faster Insights from Big Data

Datameer provides a one-stop-solution for getting all of your Web, advertising, mobile, social media, transaction, marketing automation, and CRM data into Hadoop; enriching it with third-party data; analyzing your data; and visualizing results using wizard-led data integration, point-and-click analytics functions, and drag-and-drop visualizations. Our broad set of data connectors and analytic functions make it easy to:

- Rapidly combine and enrich existing data sets with third-party, customer, and other data
- Perform ad-hoc analytics to test what-if scenarios
- Better understand the customer journey and identify the most effective campaigns
- Identify the behaviors of customers at risk of churn

As a result, you can answer questions like:

- What’s really happening across the customer journey?
- Which campaign combinations accelerate close?
- Which features do users struggle with?
- Which product features drive adoption?
- How can we acquire more customers at less cost?
- How can we proactively address churn before customers actually leave?
- Do keywords influence deal size?

Real-World Customer Results

Companies in retail, financial services, gaming and telecommunications are using Datameer to get amazing results. In just 2-4 weeks, they gained insights that helped them:

- Increase customer conversion by 60%
- Improve targeted advertisement resulting in an estimated $1.65 million in savings
- Reduced customer acquisition cost by 30%
- Increase revenue by $20 million
- Double their revenue

To better understand the benefits of Datameer, consider the following customer case studies.

Targeting Promotions to Reduce Customer Acquisition Costs

This major financial services company faced mushrooming customer acquisition costs, and as a result, needed to target customer promotions effectively. This required having a 360-degree view of customers and prospects that’s as accurate as possible. Historically, customer information has been limited to demographic data collected during sales transactions. But today, customers interact more than they transact – and those interactions occur on social media and through multiple channels. This customer wanted to turn the data customers generate via interactions into a wealth of deeper customer information and insight (for example, to understand their preferences).
The company chose to use Datameer to correlate customer purchase histories, profile information and behavior on social media sites. This involved collecting customer profile data and then correlating it with transactional data and things customers “liked” on Facebook. Correlations revealed unexpected insights – for example, they identified that their platinum customers “liked” watching the Food Channel on television and shopped frequently at Wholefoods. These insights helped the company better understand the interests of their high-value customers and what they were reading. They used these insights to target their advertisements by placing ads and special promotions on cooking-related TV shows and Facebook pages and in organic grocery stores. The result? Much higher conversion rates and a 30% reduction in customer acquisition costs.

**Reducing Churn in Financial Services**

A leading financial services retirement planning company is using Datameer as part of a strategic initiative to reduce customer churn, especially for customers approaching retirement age. This required better understanding which client behaviors could signal movements of funds so they could deploy timely retention campaigns.

With Datameer, the company successfully integrates data from its CRM system, website, call center and customer profiles (for example, to identify customers approaching retirement age) and correlates them to predict the behavior of customers at risk of churn. Analysis identified behaviors such as clients calling for information with an outside financial consultant on the line; a change in address, workplace, or power of attorney; and browsing on the company site for forms as being predictive of churn. Armed with these insights, the company can proactively reach out to at-risk customers and offer them wealth management services. In 50% of the cases, the company is able to retain customers if they know in advance that the customer is considering moving their money.
Manufacturing, operations, service or product executives know all too well the intense pressure to optimize asset utilization, budgets, performance and service quality. It’s essential to gaining a competitive edge and driving better business performance. The question is, how can IT executives help them achieve these goals? By quickly delivering high-impact data projects that help them achieve their goals. Armed with the right solutions, they can analyze product availability and predict product failures before they occur, optimize existing infrastructure to increase up-time, and reduce operational and capital expenditures. And they can better meet service level agreements by proactively identifying and fixing potential issues.

The key is unlocking insights buried in log, sensor and machine data – insights like trends, patterns, and outliers that can improve decisions, drive better operations performance and save millions of dollars. Servers, plant machinery, customer-owned appliances, cell towers, energy grid infrastructure, and even product logs – these are all examples of assets that generate valuable data. Collecting, preparing and analyzing this fragmented (and often unstructured) data is no small task. The data volumes can double every few months, and the data itself is complex – often in hundreds of different semi-structured and unstructured formats.

Big Data Analytics at Work

Big data analytics allows you to quickly combine structured data such as CRM, ERP, mainframe, geo location and public data and combine them with unstructured data such as network elements, machine logs, and server and web logs. And then, using the right analytical tools, you can use this data to detect outliers; run time series and root cause analyses; and parse, transform and visualize data. For example, you can use customer and device usage across networks to identify high-value usage. Or you can integrate and analyze historic machine data and failure patterns to predict and improve mean time-to-failure – or ERP purchase data and supplier data to optimize supply chain operations. And you can use sensor and machine data to identify and resolve network bottlenecks. The possibilities are endless.
How Datameer Delivers Faster Operational Insights from Big Data

Datameer makes big data analytics so simple that anyone can use it to turn log, sensor and device data into valuable, timely insights. And we can do it faster than any other solution on the market. We provide a one-stop-shop for getting all of your sensor, log, and other machine data into Hadoop; quickly analyzing that data; and visualizing your results using wizard-based data integration, point-and-click analytics, and drag-and-drop visualizations.

With Datameer, you can integrate any data using 55+ out-of-the-box connectors and a file parser, as well as join data using join and enrichment functions. Once your data is ready, you can use a point-and-click interface and spreadsheet to analyze data with ease. Take advantage of 30+ visual widgets and free-form infographics for stunning visualizations that reveal hidden patterns and correlations. And use unstructured data functions (such as Xpath, Json and URL functions), outlier and behavior detection capabilities, and time series analytics to turn data into breakthrough insights.

Using these insights, you can answer questions such as:

- Do all of our machines have the right patch level?
- Can we predict outages based on connected device data?
- Are there anomalies in the network traffic?
- How can we predict the need for production maintenance before problems actually occur?
- Do we have buggy areas of code? Where?
- What patterns and trends can we see in connected home sensor data?
- How can we align tower upgrade requirements with actual customer usage?
- Are certain car parts failing faster than other parts based on different usage?

Real-World Customer Results

Companies in telecommunications, high tech, and financial services – as well as those engaged in leveraging the “internet of things” – are using Datameer to get amazing results. In just 2-4 weeks, our customers have gained insights that helped them:

- Reduce network failure by 30%
- Decrease IT costs by 60%
- Save $150 million annually in capital expenditures by targeting exactly where infrastructure needs to be upgraded
- Reduce product failure rates

To better understand the benefits of Datameer, consider the following customer case studies.
**Vivint: Making Connected Homes Smarter Using Big Data Analytics**

Vivint, the largest home automation company in North America, is leading the charge in the data-driven, connected home movement. Serving more than 800,000 homes, Vivint’s touchscreen panel – the hub their products use to communicate – creates a network connecting all of a home’s smart systems (i.e., security, HVAC, lighting, small appliances, video, and other devices). Part of the “Internet of Things,” Vivint’s solutions enable homes to be smarter, safer, and more energy efficient.

Vivint selected Hadoop as its analytics infrastructure platform, but IT was spending too much time preparing and integrating the data – and not enough on value-added analysis. Because timely intelligence is critical to the smart home experience, Vivint uses Datameer to shorten the time it takes to go from raw data to actionable intelligence. Datameer’s intuitive, Excel-like user interface enabled the Vivint team to be up and running very quickly. Today, Datameer seamlessly integrates with their Hadoop platform and makes staff more efficient. People can integrate and analyze streaming data, not just raw data, which is critical to their smart home analytics solution. (Instead of one row of data per customer, there may be thousands or millions of rows per customer.)


**Telecomm Capacity Planning and Optimization**

A leading telecommunications service provider wanted to optimize network capacity—that is, have enough capacity to meet existing and forecasted demand, but not excess capacity that would result in unnecessary capital expenditures.

Network capacity requirements are driven in large part by the percentage of subscribers with smart phones and the introduction of new data services. Previously, capacity forecasting was based on data around voice traffic only; it did not include data for mobile broadband traffic. As mobile broadband usage increases, traditional forecasting methods are no longer accurate. Accurate forecasting is essential so that capacity can meet demand and customer satisfaction can be maintained without excessive capital expenditures.

Using Datameer, the company integrated subscriber data (including demographic, device, access technology (2G/3G/4G) and application behavior data) and correlated it with specific network capabilities, such as 3G capacity and Long-Term Evolution (LTE) network availability, and network performance data. People can analyze it together and use the insights gained to make informed decisions about network capacity planning, including where to invest in or curtail infrastructure. Better planning and decision making has resulted in over $100 million in savings.
Fraud and Compliance

If you are responsible for security, fraud prevention, or compliance, then data is your best friend – if you can use it to identify and address issues before they become problems. The fact is, security landscapes and compliance requirements are constantly evolving, as are the methods that the bad guys are using to defraud your business and customers.

Data-driven insights can help you uncover what’s hidden and suspicious – and in time to mitigate risks. For example, analyzing data can help you reduce the operational costs of fraud investigation, anticipate and prevent fraud, streamline regulatory reporting and compliance (for instance, for HIPPA), identify and stop rogue traders, and protect your brand. But this requires aggregating and analyzing data from a myriad of sources and types and analyzing it all at once – no small task. Think financial transaction data, geo-location data from mobile devices, merchant data, and authorization and submission data. Throw in data from lots of social media channels and your mainframe data, and you have a significant challenge on your hands. However, with the right tools, this melting pot of data can yield insights and answers you never had before – insights you can use to dramatically improve security, fraud prevention, and compliance.

Big Data Analytics at Work

Big data analytics enables you to combine, integrate and analyze all of your data at once – regardless of source, type, size, or format – to generate the insights and metrics needed to address fraud and compliance-related challenges. For example, you can perform time series analysis, data profiling and accuracy calculations, data standardization, root cause analysis, breach detection, and fraud scoring. You can also run identity verifications, risk profiles, and data visualizations and perform master data management.

How Datameer Delivers Faster Insights from Big Data

Datameer provides a one-stop-solution for getting all of your transaction, geo location, merchant, authorization, social media and mainframe data into Hadoop; quickly analyzing it; and visualizing your results using wizard-based data integration, point-and-click analytics, and drag-and-drop visualizations.
For example, people can quickly iterate through fraud pattern changes, perform time-series analytics, detect anomalies using strong data profiling, and more. At every step, they can take advantage of strong metadata management and data lineage functions, machine learning capabilities, intuitive self-service, and data profiling (for example, to detect anomalies in data that could lead to fraud detection and identification of compliance violations). They can also perform Smart Sampling, which enables interactive analytic data discovery and design.

And as a result, they can answer questions such as:

- Is someone accessing data that he/she should not?
- Where do the hack attempts originate?
- What customer behavior signals potential fraud?
- Is this customer or prospect too high risk to service?
- How can we assess customer risk before extending credit?

**Real-World Customer Results**

Our solutions deliver bottom-line results. For example, in just 2-4 weeks, Datameer customers have gained insights that helped them:

- Identify and prevent $2 billion in potential credit card fraud
- Avoid $5.5 million in data breach costs
- Predict security threats within seconds instead of weeks
- Reduce data accuracy analysis time
- Lower the OpEx and CapEx associated with fraud detection and prevention

To better understand the benefits of Datameer, consider the following customer case studies.

**Identifying and Prevent Potential Fraud**

Credit card fraud is an ongoing problem for financial services companies and retailers. Current estimates are that up to 9% of all online transactions are fraudulent. With more than $20 billion of fraudulent transactions, the rate of fraud growth is 2 times the rate of transaction growth. At the same time, the nature of credit card fraud is changing. Instead of stealing a credit card and using it to buy big-ticket items, credit card thieves are now making numerous, small transactions that often escape the notice of vendors and the credit card companies. They lack the ability to integrate and analyze all of their data to uncover seemingly benign but malevolent patterns of use.

To address this issue, a large credit card issuer is using Datameer to integrate and analyze all point of sale, geo-location, and authorization code and transaction data. The goal is to identify patterns in historical data and spot outlying data that indicates potentially active fraud across thousands of stores. With Datameer, this company identified and prevented over $2 billion in potential fraud.
Data-Driven Products and Services

Innovating new products and services – it’s the lifeblood of any business. Unless you can develop new, differentiating offerings that closely align with customer needs and desires, how else can you create new revenue streams, gain a competitive advantage and boost customer loyalty?

Savvy companies are leveraging big data to create new, data-driven product and service offerings. Think about how you can harness your CRM data, social media, transaction data, geo-location data, device, sensor and product data. You can even enrich your data with brokered, third-party data. All this and more can be used to offer new data and analysis offerings. For example, you could sell analytics reporting to help companies make their ads campaigns more impactful. Or operationalize analytically-driven, predictive support offerings so customers can ensure 100% uptime for mission-critical servers. The possibilities are endless.

The challenge, of course, is turning big data into insights. How can you bring together and analyze all of your data at once – structured and unstructured – and use it to deliver innovative new data and analytics products and services?

Big Data Analytics at Work

Big data allows you to combine, integrate and analyze all of your data – regardless of source, type, size, or format so you can quickly and affordably scale to huge volumes of data and analyze them for insights. (Traditional EDWs are simply too slow and costly for most companies to impact product innovation.) At the same time, you can quickly run sophisticated analytics that can’t be performed using a typical EDW – for example, clustering, click path analysis, and advanced data mining.

How Datameer Delivers Faster Insights from Big Data

Datameer makes it easy for anyone to turn big data into valuable, timely insights by providing a one-stop-shop for getting all your data types into Hadoop; analyzing that data; and visualizing your results. As a result, you monetize and analyze your big data quickly and cost effectively.

We support every step in the analytics pipeline, empowering you with all of the connectors, integration tools (CSS Skinning, REST Provision and SSO), and pre-packaged data algorithms needed to jump-start the process. Use our visual widgets and free-form infographics to generate visualizations that make data instantly meaningful to you and your customers. In addition, our solution is fully extensible using IoC architecture, APIs for connectors, and more, as well as multi-tenant.
As a result, you can turn your data into innovative products and services – and be able to answer questions such as:

- How fast can we prototype a data product?
- Do we have analytics IP that is valuable to others – for example, to help them be more efficient?
- How can we scale users and data?
- Can we use machine data to predict service needs or optimal configurations for customers?
- How can we respond to growing requests in an agile way?
- Can we provide a monitoring service for our customers to add value?

Real-World Customer Results

Our solutions deliver bottom-line results. For example, a media company is using Datameer to provide brands and advertisers with analytic reports about how customers behave using mobile apps, allowing them to optimize ads and boost responses. And Workday, the leading provider of enterprise cloud applications for human resources and finance, uses Datameer to provide customers with reports on how their end users are actually using Workday software.

To better understand the benefits of Datameer, consider the following customer case studies.

**OPower: Giving Customers Personalized Energy Usage Insights and Recommendations**

Opower is a leading energy management company that combines a cloud-based platform, big data, and behavioral science to help utilities around the world reduce energy consumption and improve their relationship with customers. OPower, in partnership with 93 utilities, helps over 32 million consumer households to lower their energy use and costs and significantly reduce carbon emissions. Working with smart meter, thermostat and other device data from Pacific Gas and Electric, OPower gathers over 7 million data points each day and provides analytic reports to utility companies. These reports are included in household bills to encourage consumers to conserve energy by comparing their household energy usage to their neighbors. OPower found that their MySQL database infrastructure could not analyze the data quickly enough, and much of the data they were gathering was not being fully used. In fact, while OPower had over 60 instances of MySQL, they still couldn’t run analyses across the breadth of their data.

To address this issue, OPower created an “Energy Data Hub” by migrating their data infrastructure from mySQL to Hadoop and using Datameer for analytics. Their data scientists led the decision to go with Datameer, as they needed a solution with self-service, end-user tools that data engineers and product managers could use to access and analyze data in over 200 tables.

Today, OPower product managers use Datameer to answer client questions directly – without IT assistance. They can run analyses – for example, using consumer thermostat data to understand patterns of energy usage. The end result? OPower has dramatically lowered the time required to access data for analytics and empowered product managers with insights they used to help clients reduce energy consumption by $500 million and CO2 output by 7 billion pounds.

EDW Optimization

EDWs are critical business and IT resources today – but as the size and complexity of the data to be analyzed increases, you’ll eventually hit the limits of traditional data warehouses. You’ll know it when your processing times take too long to meet business needs, your costs get out of control, or you struggle to process and analyze new data types. For both IT executives and key stakeholders responsible for analytics, business intelligence and enterprise data, this is a serious problem. Today’s business decision makers simply can’t afford delays in insights anymore.

The solution is to offload the most challenging data management and analytics activities to new technologies and management approaches designed to handle them. For example, do you need to cut the costs of data preparation and cleansing? Reduce time to insight by offloading the most time-consuming analytical tasks? Support a variety of new data types, especially unstructured data? Or better manage rapidly growing log, sensor and other unstructured data?

Traditional EDWs were never designed to solve these types of challenges. First, they make it prohibitively expensive to manage the ever-increasing volumes of transaction and interaction, mobile data, website click stream data, ad click through, log data, sensor data, and unstructured machine data. At second, they’re slow to produce analytics from unstructured data because they don’t support it. This forces technicians to manually give this data structure before analyzing it.

Big Data Analytics at Work

The good news is, big data analytics solutions that run on Hadoop can solve these challenges. Big data analytics solutions running on Hadoop make it easy to overcome these challenges because they allow you to cost effectively scale to any volume of data and store and analyze any and all data types together – both structured and unstructured. You can also use them to extract structured data from your EDW into Hadoop for cheaper storage and then send back into EDW for analytics. All data can be analyzed as is, eliminating costly data preparation activities. At the same time, big data analytics is so powerful because it enables you to combine, integrate and quickly analyze all of your data at once – regardless of source, type, size, or format – to generate the insights your business needs. In addition, you can parse, clean, profile, match, enrich, aggregate, and normalize data, as well as manage ETL workloads and generate master data.
How Datameer Delivers Faster Insights from Big Data

At Datameer, we provide a one-stop-solution for getting all of your transaction, geo location, merchant, authorization, social media and mainframe data into Hadoop; quickly analyzing it; and visualizing your results using wizard-based data integration, point-and-click analytics, and drag-and-drop visualizations.

Datameer also supports transaction, interaction, and observations data and enables seamless, bi-directional integration between all major EDWs, such as Oracle, Teradata, and Netezza. In addition, it supports self-service data extraction, preparation, and cleansing by business analysts and enables exploratory or ad-hoc data discovery.

Using Datameer and Hadoop at every step, you can take advantage of linear scalability, point-and-click data preparation and cleansing, visual data profiling functions, and a metadata repository that automatically tracks data lineage. You also get strong security, monitoring and scheduling capabilities and a schema-on-write approach that eliminates the need to pre-model data. Together, these capabilities provide a cost-effective, linearly scalable and flexible solution that drives the fastest time to insight when compared to all other solutions.

And as a result, you can answer questions such as:

- How can we lower the cost of data preparation and cleansing?
- Can we do cost-effective analytics on large volumes of data?
- How can we streamline our analytic process flows to deliver insights faster?
- How can I lower the cost of expensive analytics?
- Can we support new data types and unstructured data?

Real-World Customer Results

To better understand the benefits of Datameer, consider the following customer case studies.

**Analyzing 7 times more data 96% faster**

Using their existing SAS and Teradata solutions, the consumer credit cards division of a leading financial services company was analyzing 0.7 billion customer attributes in 36 hours. After moving their data to Hadoop and analyzing it with Datameer, they’re able to analyze seven times more customer attributes – or close to 5 billion attributes in 51 minutes.

By analyzing seven times more customer attributes, they can get a much better understanding of the customer journey. For example, they can get insights that are critical to helping them prevent credit card fraud, improve cross-sell and upsell rates, improve customer retention, reduce churn, and more. And even better, they are generating these breakthrough insights at a fraction of the cost of their traditional solutions.
To learn more about big data analytics and how companies are using Datameer to gain competitive advantage, visit www.datameer.com.