Reasons to Get Excited About Data

IBM

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23 REASONS *to* GET EXCITED ABOUT DATA

These days, everyone's tossing around the term "big data." The term is nothing new – businesses have been collecting and analyzing data since the 1950s, before the two words were ever even uttered. Take a look back in time and you're likely to see someone laboriously poring over a sheaf of spreadsheets, manually going through row after row to identify trends and gain insights. It's a job Bob Cratchit would probably have turned down.

But the spreadsheet approach was reliable in that it could impact future decision making. Data has always had value to businesses because they can use the information and associated analysis to increase operational efficiency, reduce costs and serve their customers. Today, however, instead of manually processing data, data analysis technology makes it possible to make *immediate* decisions, giving companies a leg up on their competition.

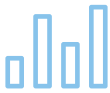
Now, can you possibly contain your excitement about data?!!

Of course you can. Because data isn't exactly something that lights your fire unless you can visualize how it can make *your* life better. And it can, with the right application. Data is exciting when it's:

1. Your Business Partner
2. A Personal Friend
3. A Difference Maker in the World
4. A Buddy You Can Lean On

THE LATEST TRENDS

More people are doing more things – personally and professionally – with data, and best practices will continue to develop. Self-serve, more democratized data analytics will:



GET BIGGER: Access to big data will be readily available to help us give context to decision making. We'll be extracting value from everything data-ish, so look beyond your computer, smartphone and tablet. Look near, at your watch, fitness tracker and other wearables. Look far, to that oil rig in the Gulf and satellite in space.

GET FASTER: Users will demand speed, which will require technologies to keep up. Data analytics technologies will offer expansion options to give speed to existing solutions. We've come to expect instant gratification, so we can make immediate decisions.

GET CLOUDIER: Big data has already combined with the cloud and the data warehouse will eventually meet its end game. Data analytics technology will increasingly move towards on-demand, cloud-based warehousing.

Still not jumping up and down about data? Here are 23 reasons why you should change your tune.

23 REASONS *to* GET EXCITED ABOUT DATA

SECTION 1

Power Your Business

1) Increase sales and future opportunities. Data in the sales environment is based on the assumption that past activity can predict a prospect's behavior, specifically through use of past purchases and preferences. You can look at what a customer bought and when, so you can forecast when they'll buy again. Plus, you can use these details to determine whether it's appropriate to offer complementary products. Some key demographics to review are:

- **Online Sales:** Shoppers often browse through your offerings and place items in the basket – only to leave them there because they're not ready to buy. You can study this data to re-target those shoppers with additional marketing messages or deals on what's in their cart.

- **In-Store Purchases:** Creating a customer loyalty program is an excellent way to understand buyer behavior. Collect data such as purchases, anniversaries, wish lists and other details to help you plan marketing efforts.

Jessie Liu explains how big data can help retail companies – both big and small.

JESSIE LIU

@jessiecliu

Today retailers are constantly finding out innovative ways to draw insights from their data, both online and offline, to better serve their customers and increase sales. In fact, big data analytics is applied at every stage of the retail process: from identifying the right customers, optimizing pricing for a competitive edge, predicting trends to forecasting demands. Big retailers have been reaping the benefits of their data for years, but only recently did they start to get a grip on how to use unstructured data like social media posts, customer comments, pictures, phone conversations, and location data. Small businesses can also benefit from the same data even if they cannot afford to implement expensive data collection infrastructure and hire data scientists. A growing number of software companies such as IBM are providing big data and analytics as a service to small businesses.

Retailers find innovative ways to draw insights from data to better serve their customers.

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2) Collect more payments on time. When you let accounts receivable go longer than payment terms, you're essentially extending credit to a vendor. Data can help you avoid the situation and reduce the need to take collection action. Here are just two of many examples:

- **Billing and Invoicing:** Data can trigger notifications from your accounting system, informing you that a bill needs to go out, or has gone out and not been paid. It also helps lessen the impact of human error when using manual processes for sending out invoices.

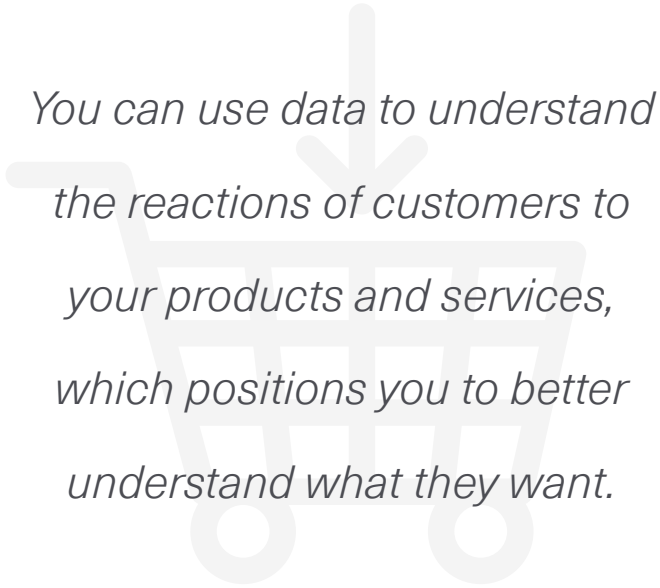
- **Contracts:** Collecting details on the companies you do business with can also tell you when your sales people are overriding invoice terms, which is helpful for keeping tabs on contracts that deviate from standard policies. This data can also be used to assist you with creating new contractual terms in your invoices. For example, if credit terms are overridden often, it may be time to change them.

3) Make your products and services better. You can use data to understand the reactions of customers to your products and services, which positions you to better understand what they want from you – and what potential customers will expect. Common customer actions include:

- **Product Returns:** A high number of product returns causes customer trust and confidence to slide.
- **Emails:** Open rate, click-through rate and conversion data can help you improve your email marketing campaigns.
- **Delivery:** Use data based on when and how fast your products got to customers to make adjustments to your processes or shippers.

What's in this data can show you patterns of success you can apply more often or to other areas. Or, you might see a need for an overhaul to improve your product lines, services or policies. With your data, you can set thresholds that will issue notifications when customers take these actions – and you can respond accordingly.

Deborah Berebichez believes data should drive all operations in an organization and every member of the team must embrace the value of data.



You can use data to understand the reactions of customers to your products and services, which positions you to better understand what they want.

DEBORAH BEREBICHEZ

@debbiebere

I believe data science should be able to inform every single aspect of the company. It should be used by everyone, not just a quantitative team of data scientists that only inform marketing or product management. It should really be sort of like the respiratory system of the whole company and it should be democratized.

I believe data science should be able to inform every single aspect of the company.

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To learn more about Deborah, check out these videos:

4) Become a market savvy expert who's ready to find new markets. It's difficult to look at an overview of your existing market and determine where to expand into new markets without data. There are four types of data analytics that can tell you more about the current landscape and help you find new spaces.

1. **Customer Analytics:** Analytics can tell you a lot about your customers. You can see the age groups that are active in your market or one you might want to enter. Gender, average income, family size, internet usage and other data are helpful as well.

2. **Website Analytics:** Key figures coming through your website metrics include visitor location, language, search terms and referring sites. There might also be more direct interaction, such as who is making inquiries, making purchases and reviewing products. Analytics enables you to make sense of these different metrics.

3. **Marketing Analytics:** Chances are you use a combination of website, blog, social media profiles and other internet marketing combined with print, radio and TV advertising. When analytics are applied to the data extracted from these efforts, you get insight about where you might consider looking for new markets.

4. **Social Media Analytics:** Trends, engagement and interactions on social media provide considerable data regarding emerging markets. Data analytics tools deliver insight you need to be part of the conversations your customers are having online.

Juntae Delane is a big fan of social media marketing and the role data plays.

JUNTAE DELANE

@JuntaeDeLane

Use data to improve your organization's social media marketing. Here's how you can do it in four relatively easy steps:

1. Understand how data is structured and how you can use it for actionable insights. You have structured data that fits nicely in your database. It's the data that is easily linked to one another such as a consumer's first name, email, and mailing address. But, you also have unstructured data, which is the exact opposite. It's data that is not easily linked to each other, such as social media chatter.

Now here's the tricky part: To increase your data insights, you must attempt to connect the structured data with the unstructured data. Meaning, you must connect your pre-existing consumer data with your consumer's social media chatter. You can use online listening and social media management tools to collect unstructured data. Tools such as Salesforce, Ubervu, and Sprout can help.

2. Develop a strategy to leverage the data. Naturally, this strategy should align with your marketing objectives to be effective. For instance, if you want to increase conversion, you can utilize this data strategy to do exactly that. Your data strategy formula may look something like this:

Pre-Existing Data + New Social Data = Sentiment Score

While creating a sentiment score, use your discretion when assigning a value to each consumer. You know your industry and audience best. Create profiles of consumers that include both data types and use these profiles as benchmarks when developing future consumer sentiment scores.

3. Create a sentiment score to guide your highly targeted marketing communications. You can assign a sentiment score to all of your prospects and align a content marketing strategy for each score range. For instance, consumers with lower sentiment scores can receive more personalized communications and those with higher scores can receive communication to reinforce the brand position.

4. Begin execution based on your newfound data insights. Use the content that resonates best with your potential consumers. If your data shows that potential consumers are asking questions or making comments about your marketing campaigns, you need to create content that fills that gap. For instance, if your consumers have a low sentiment about your purchase process, create an infographic that shows the various steps to purchase. Overall, once you have obtained new data insights, you can create content to alleviate consumer challenges, directly communicate with potential consumers with highly relevant information and adjust your overall marketing communications based on this insight.

In conclusion, to enhance your data insight, you must infuse data collection within every phase of your marketing funnel and augment with pre-existing data to gain actionable insight. As the quote states, you must open your eyes and look at the data your consumers are generating and listen to what they are saying. Ultimately, this insight will help you better understand your consumers so that you can create content to meet their needs.

To enhance data insight, you must infuse data collection in every phase of your marketing funnel.

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To hear more from Juntae, check out these videos:

To read more from Juntae, check out his blog post:

5) Streamline processes for maximized operations. Making your business run more smoothly and improving productivity require you to eliminate those processes that are clogging efficiency. Data supports the analysis by answering a number of questions:

- **What happened or is happening?** Here, data offers insight on each phase of your workflow process, identifying and reporting on events.
- **Why did it happen?** Diagnosis of weaknesses or errors is easier when you look at the data that surrounds and supports the events.
- **What will happen due to the event?** Data helps you forecast a multitude of circumstances based on an event, ranging from the best possible result to the worst case scenario.
- **What is the desired outcome?** From the best possible result, you can work backwards using data to identify what's happening that's holding your processes back.

Data helps you forecast a multitude of circumstances based on an event, ranging from the best possible result to the worst case scenario.

To use or not to use data? John Cook says you've got to start with some.

JOHN COOK

@JohnDCook

I would say that using a small amount of data is better than not using data. I think with all the talk of big data people think, “oh, I’ve got to have an enormous amount of data before I can use it.” [When] you have some way to combine what you know or believe with a small amount of data, then you are better off than if you are making decisions without data at all.

Combine what you know or believe with a small amount of data to make better decisions.

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To hear more from John, check out this video:

ANIL BATRA

@AnilBatra

For Anil Batra, business owners should ask "why?" when considering what to measure.

You should be asking: "Why am I in business, what do I want to do, how can I create a better customer experience, how can I drive my customers to do what they are here to do and what do I want from my business?"

...That's when you start to define what should be measured, what KPI should be there. So you have to look at what you are doing as a business then figure out what you should be measuring.

Look at what you are doing as a business then figure out what you should be measuring.

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To hear more from Anil, check out these videos:

6) Get your business running like a well-oiled machine. There are a number of ways you can improve your business beyond processes and operations. But do you know what they are or where they can be found? Data helps you identify those policies, products, services and other offerings where your business isn't delivering the best possible results. There are three primary areas where you'll see benefits:

1. **Costs:** You've probably gotten so used to shoveling out money for certain costs that you've never even considered the opportunities to reduce that spend. A good look at your data can tell you where waste or inefficiency should be addressed.

2. **Resources:** If you're not using your available resources efficiently and effectively, you're leaving money on the table. Waste and inefficiencies abound in certain processes, but you'll never know unless you review your data.

3. **Employees:** Data you collect from your team can yield useful information about current employees, your recruiting process and employee retention. This is especially important considering that your team is among your most valuable assets, representing a significant investment.

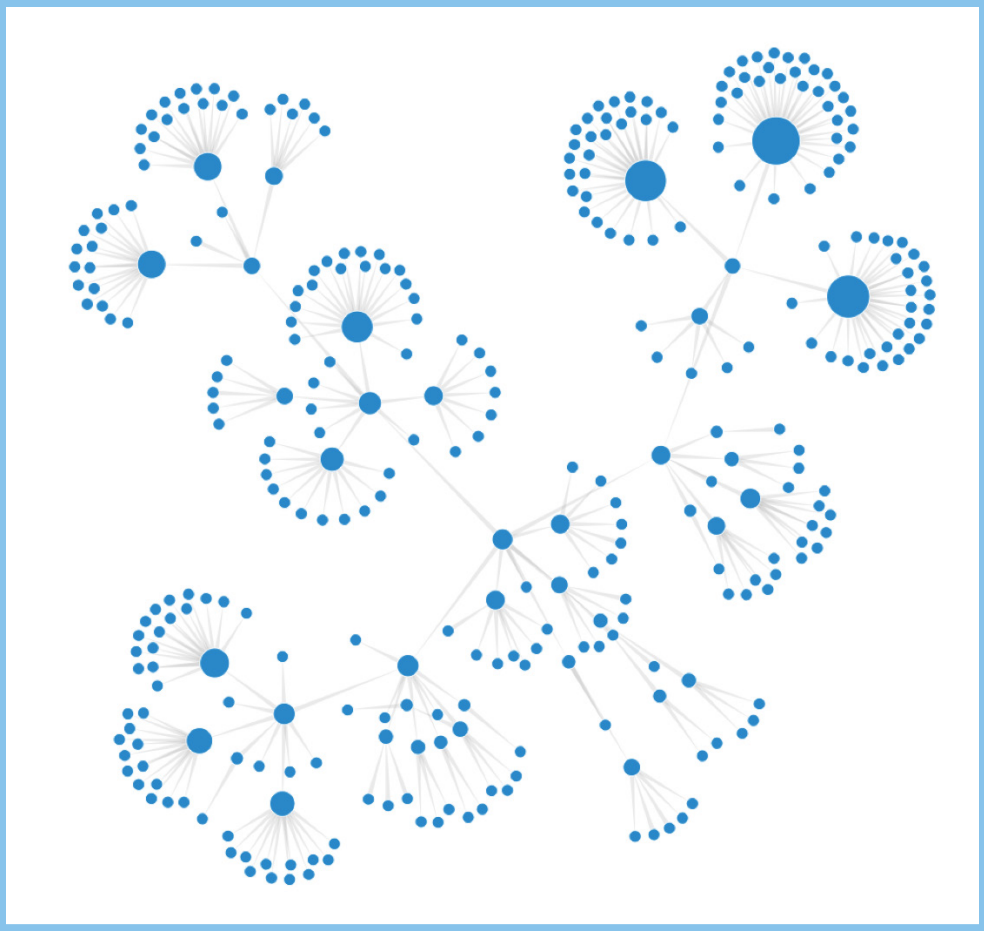
You've probably gotten so used to shoveling out money for certain costs that you've never even considered the opportunities to reduce that spend.

It's important to understand how organizations work when talking about the application of data to increase efficiency and productivity, according to Valdis Krebs. Companies don't always follow the mold of the prescribed organization.

VALDIS KREBS

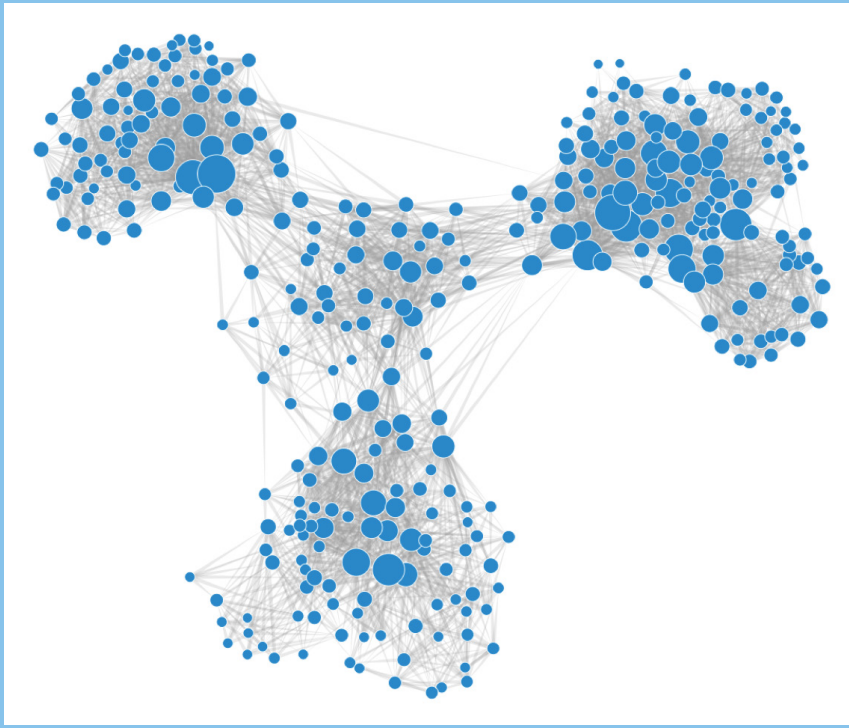
@orgnet

We are used to looking at our organizations as hierarchies -- a simple organization chart showing who reports to whom. This is referred to as the “prescribed organization” -- someone designs and designates the roles and responsibilities. A picture of a prescribed organization is shown in the figure below. It is not drawn as the typical pyramid, but as a hub and spoke network. The nodes represent employees and the links show who reports to whom. Node size is determined by the number of direct reports.



Organization Chart - Who Reports to Whom

Yet, that is not how we get things done in an organization. We utilize much more than the prescribed links. We find knowledge, advice and support to get things done through our personal organizational networks. The sum total of these connections is called the “emergent organization” -- no one designs it, we all contribute to it via the connections we make. The diagram here shows how work really gets done in the organization. It shows the vertical connections, but also the horizontal and diagonal connections in the organization. Node size is determined by how active an employee is in getting things done.



Emergent Organization - How Things Get Done

Maybe we don’t work in well-oiled machines any longer. Our current work environments appear to be more like adaptive and constantly learning organisms.

To hear more from Valdis, check out this video:

To read more about this and see more examples, check out Valdis' blog post:

7) Offer customers what you know they're looking for. Data is especially useful at drilling down into the demographics of your customer base. Details like their age, income, living environment, household buying habits, average spend on certain goods, job position and other information can help you separate them into segments for marketing purposes. You understand the importance of knowing your audience and engaging them with marketing messages, so it's clear the same tactics won't work for all of your customer segments. You're better able to target the right message to the right group when you have data to tell you about their preferences and habits.

Valdis uses an online retailer as an example of how companies can be delivering a great customer experience through usage of data.

VALDIS KREBS

@orgnet

As we go through our daily life, we leave behind indicators or signals about what we are doing, where we are going, who we are doing it with, and what we are choosing. The tracks we leave behind can give great insight into who we are, and who we are like. Consider this scenario.

An online retailer collects the electronic bread crumbs we leave behind as we browse and shop their web site of consumer choices. The books we buy, the music we listen to, all reveal much about us. Looking at people who have similar tastes in books and music allows [that online retailer], and other data miners, to put us into emergent groups of highly similar preferences.

They also share this information with visitors to their website via their popular "people that bought this item, also bought these other items" algorithm. This simple connection allows us to be a large network of similar behavior. Yet, it does not reveal the private identity of the consumers making the choices on their site. Even though we do not know the people, we can identify their patterns -- the clusters of similar likes.

IBM Watson Analytics, a cognitive computing tool, is a great place to investigate consumer data.

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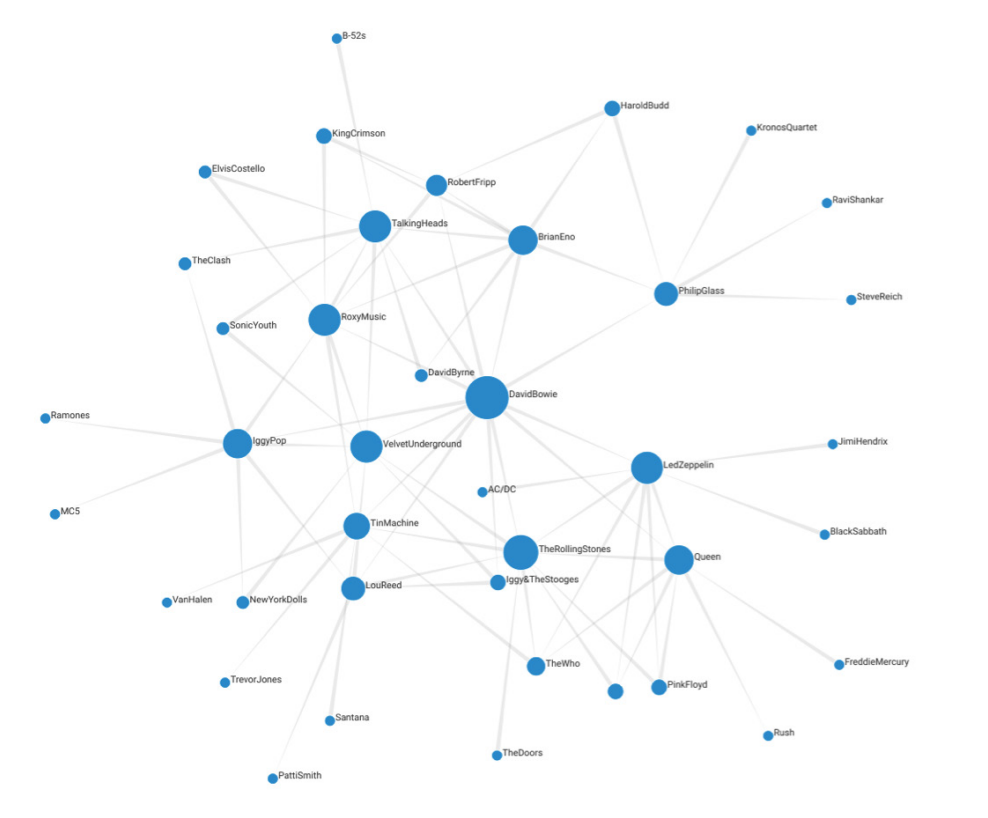

The reach of David Bowie in modern music

IBM Watson Analytics, a cognitive computing tool, is a great place to play with and investigate consumer data from online retailers. For example, we can look at music preferences. Recently, the great rock and modern music influencer, David Bowie, passed away. Looking at data on music purchases, through Watson Analytics, allows us to see some interesting patterns. What exactly did David Bowie influence? How was his fan base connected to, and highly similar, to the fan bases of other musicians? This diagram shows the various fan bases that David Bowie touched and the various fans who bought both his records and those of other prominent musical stars.

As you can see, music reveals certain similarities about us.

To hear more from Valdis, check out this video:

To read more about this and see more examples, check out Valdis' blog post:

8) Attract, win and retain more customers. Customers love loyalty programs. They can earn points or rewards on future purchases, get extra bonuses on birthdays or anniversaries, or receive targeted information on discounts. But your business can also benefit, because you can use and apply the data gathered by a loyalty program. The numbers tell you what products customers prefer, what deals they're seeking, how much they're willing to spend and how they're using the benefits you extend. Armed with that information, you can find new customers with offers that have proven to work and keep loyal customers with personalized service.

How else can data be used in the context of a customer loyalty program? Bob Hayes has an idea.

BOB HAYES

@bobehayes

Data from your loyalty programs can be put to good use in your customer experience management (CEM) program. The primary goal of a CEM program is to optimize customer loyalty by improving the customer experience. To that end, CEM programs often rely solely on self-reported measures of customer loyalty (e.g., surveys ask customers about their expected behaviors) as the ultimate criterion by which to determine which customer touch point has the strongest link to customer loyalty. With the use of your loyalty program data, you know precisely what your customers are buying and to whom they are recommending your brand.

By marrying both attitudinal data and behavioral data in their analytics, companies can now get a more accurate picture of the factors that are responsible for improving real loyalty behaviors.

As businesses integrate data silos, they are able to ask and answer bigger business questions.

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To hear more from Bob, check out this video:

To read more about this, head over to Bob's blog post:

9) Share stories and make points when visualized. Have you ever looked at a bunch of numbers that report on a certain phenomenon or topic…but they really seem to mean nothing? Now think about how these figures could be valuable if they're put in graph, chart or infographic form. All of a sudden, you can tell a story that gives meaning to the numbers behind the phenomenon. You can see that web traffic is up and bounce rate is down – all because you made a few adjustments to your home page.

Or maybe you want to demonstrate how your solution can help a customer solve a complicated problem. You can't make the sale by reciting a bunch of numbers that you've collected. Visual representations of data are ideal for bringing content to life in creative ways you never imagined.

Randy Krum agrees.

RANDY KRUM

@rtkrum

Humans are visual creatures. We can process visual information extremely fast, and are 6.5 times more likely to remember visual information than text. These are incredibly important facts when you are trying to communicate data to others. Use data visualizations to help your audience understand your information, and remember it later when it could influence their decisions or behavior.

Humans are visual creatures.

We are 6.5x more likely

to remember visual

information than text.

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To read more about data visualizations, see Randy's blog:

To hear more from Randy, check out these videos:

WILLIAM MCKNIGHT

@williammcknight

William McKnight's take on visualizing data is especially useful for the healthcare industry.

Healthcare is a numbers business. We see the wow factor from business users when you can show the data as appealing visuals.

They are used to a spreadsheet style dashboard so when shown automated displays of charts, graphs, color highlighting, you can see the excitement. Some of this technology is not very new but until you have seen it, you do not understand the power of visualization.

To hear more from William, check out this video:

10) Get on top of those KPIs. Depending on your business, you're always looking at multiple KPIs to measure performance. But what indicators require daily monitoring, a weekly look or monthly analysis? Which KPIs mandate your full, immediate attention... and which ones need just a tweak? The data you collect assists you with categorizing those gauges you simply cannot ignore, separating them from the indicators that don't require constant monitoring.

What happens when you're not using data to properly track KPI's? Christopher Penn paints a dim picture.

CHRISTOPHER PENN

@cspenn

What's a KPI? A key performance indicator – which means, in short, if this number goes to zero, bad things happen. You might go out of business. Your project might be shut down. You could lose your job.

Tools like Watson Analytics can help you discover hidden KPIs. With a few clicks, you can discover that a business metric like revenue is strongly influenced by a combination of other diagnostic metrics. For example, suppose your website's traffic is vital for eCommerce. What influences website traffic? You could make some uneducated guesses, or plug all your digital marketing analytics data into Watson Analytics. Watson Analytics might find that Twitter clicks plus email marketing together drive website traffic better than either method alone. With that insight, you would rearrange your content marketing calendar to time both channels together, boosting your eCommerce revenue KPI.

To hear more from Chris, check out this video:

To read more about KPI's, check out Chris' blog post:

SECTION 2

Make a Personal Impact

11) Foster your curiosity as a "citizen analyst." Data can tell us a lot about the world we live in. But even just five years ago, the technology required to analyze it was out of reach for the average Joe. Fast forward to now, where the majority of us have access to enterprise-level analytics for a song. Combining data with analytics tools allows us all to be citizen analysts that download huge amounts of data, crunch the numbers and discover the deep stories that lie beneath the surface.

Christopher Penn elaborates on the "citizen analyst."

CHRISTOPHER PENN

@cspenn

If you recall in the early days of social media and content marketing, much was made of the rise of the citizen journalist, the independent participants who report alongside traditional media. We don't hear much about this trend any more because the smartphone turned everyone into a citizen journalist the moment they opened the camera app. Citizen journalism isn't a trend any longer; it's now the default.

The rise of the citizen analyst potentially could follow a similar trajectory. 5 years ago, doing heavy statistical analysis required the use of SPSS and probably one or more serious database servers. In the enterprise, these would cost hundreds of thousands of dollars to build and deploy.

The democratization of these tools means that the rise of the citizen analyst is a reality.

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Fast forward to today, where we have access to enterprise-grade analytics for nearly nothing. Basically, you can cheaply obtain the same kind of computing power that enterprises forked out six figures for not too long ago.

The democratization of these tools means that the rise of the citizen analyst is a reality. Citizens can download large public datasets from Data.gov and similar services, then crunch their own numbers and find out the deeper story behind numbers they see in the news or in their workplaces.

To hear more from Chris, check out this video:

To read more about the "citizen analyst," dig into Chris' blog series:

VALDIS KREBS

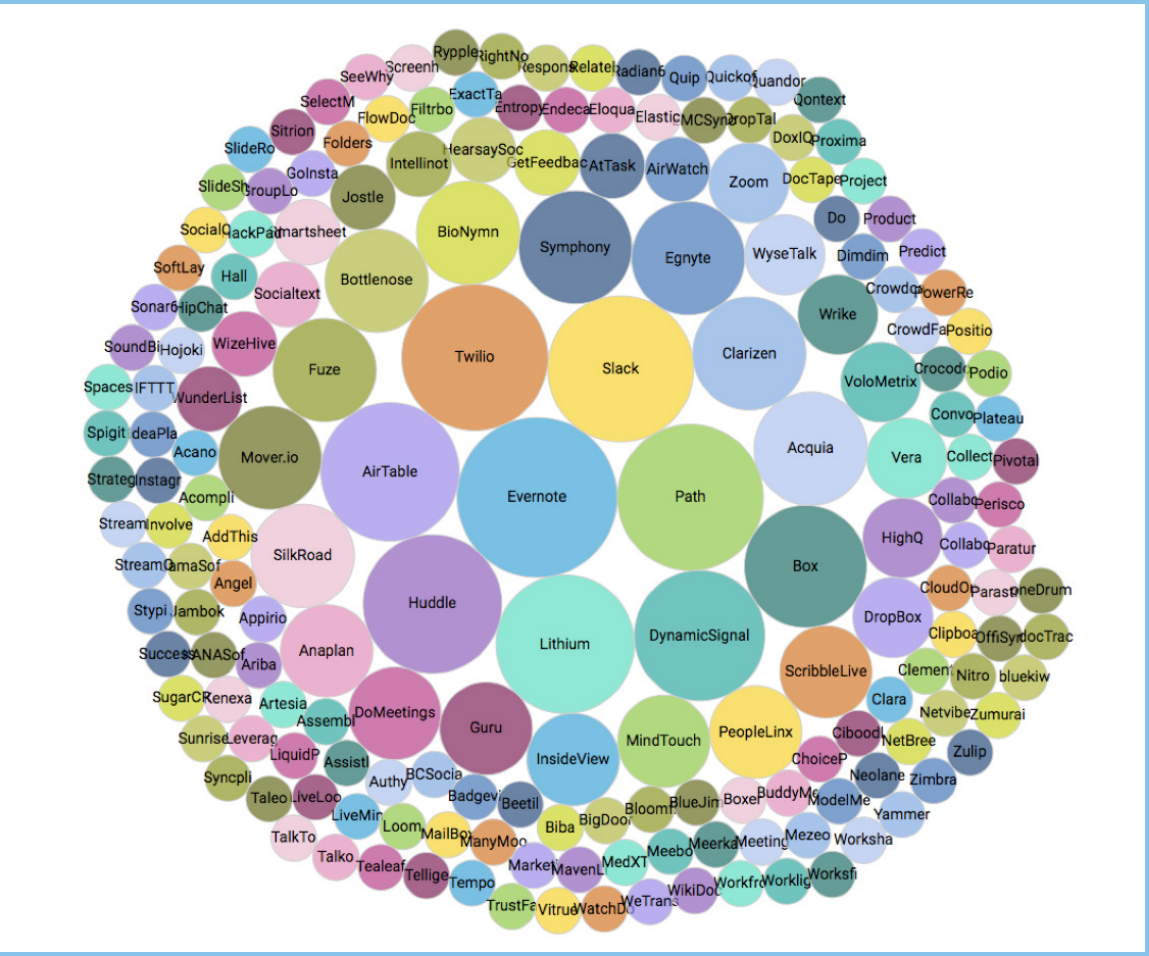
@orgnet

Valdis Krebs speaks from personal experience and, once again, includes some great graphics.

There is a lot of interesting data on the WWW. The other day I ran across the Constellation Research website and saw that they had collected data about acquisitions and investor funding in the Social Business sector from 2011 through 2016. The data was arranged in a spreadsheet but needed a bit of wrangling to be ready to load into Watson Analytics.

Once the data was done, I quickly uploaded it, and started exploring and looking for interesting patterns. My initial view of the data showed three types of companies: Investors, Acquirers, and Start-ups. The most active nodes during the time period of 2011-2016 quickly became apparent, but often we want to see slices of the total to see who is dancing with whom. So, I separated out the Start-up nodes from the Investor nodes to show the direction of the money flow. Watson Analytics revealed who were the most active Investors in this time period.

Going further, I also wanted to see which Start-ups received investments from the most Venture Capital firms. Watson Analytics showed me those VCs that were the hot Social Business firms between 2011 and 2016, which you can see below in the bubble diagram. What did the data say? The larger the bubble, the greater diversity of VCs invested in that start-up.



Popular Investments in the Social Business Sector

The above analysis was done in Watson Analytics. We have only scratched the surface with this data set. I wonder what else I'll discover? To find out, **check out my blog**.

To hear more from Valdis, check out this video:

12) Become an artist or storyteller. We've all got great stories, but data helps us tell them better. How can you talk about the "zombie apocalypse" without referring to the droves of people that became "undead" over just a few months? Can you really tell another person about how you lost weight through walking unless you show them your FitBit data? Is it possible to convince others that you've found the perfect match on Match.com without showing the data that illustrates your compatibility?

Data adds credibility to your story, which makes you a better storyteller. But it doesn't end there – data can make you an artist, even if you never pick up a paintbrush or mold clay. Effective data visualization increases reach and comprehension, making complex or obscure topics more accessible to others. The key is taking mathematical details and transitioning them into a work of art or a story.

Context drives comprehension, and Randy Krum believes data is at the core of making that translation.

RANDY KRUM

@rtkrum

Data visualization is a language of context. You dramatically improve comprehension of your data when you design a visualization that puts your data into context for the audience. This can be a series of data points over time, or comparing your data to reference data to give the audience the perspective of how your data fits into a bigger picture. Storytelling with data is more than designing a chart, it's the art of communicating specific insights from your data.

To read more about data visualization and storytelling, check out Randy's blog:

To hear more from Randy, check out these videos:

13) Be a better you. Are you trying to get into shape? Do you want to know more about your sleeping patterns so you can get better rest at night? Data can help you become a better you as it's collected on one of the sleek fitness tracker devices, like FitBit, JawBone UP4, Microsoft Band 2, Garmin Vivofit or any number of other wearable brands. Even smartwatches can help you live a healthier lifestyle with tracking applications and pedometer tools.

While the specifics vary by brand and model, fitness trackers count the steps you take, the number of stair flights you climb and other activities. Many will monitor your heart rate, so you can tell your level of activity during the day. Some wearable devices track your movements while sleeping, so you know when you were restless and when you were deep in a great REM cycle. And even better, these fitness trackers sync with your smartphone, so you can monitor your activity levels over time. This information can help you improve your health as you constantly strive to beat your daily or personal bests.

A fun story for lawyers and enthusiasts of the legal process: Fitness tracker data has even been used in courtroom proceedings by the McLeod Law Firm in Calgary, Canada. An accident victim needed to prove that her levels of activity were greatly diminished after the incident, which would impact her quality of life – and, more importantly, her jury verdict amount. So maybe that's not fun if you're the defendant, but still...

Jeremy Pincus expands on the role that wearables play in our everyday lives.

JEREMY PINCUS

@ForbesResearch

The dream of being able to understand what people are feeling as they move through their days and their lives is becoming a reality. Wearable emotion sensors are being developed at an astonishing pace, including EEG sensors placed in headgear, electro-dermal sensors placed in Fitbit-type bracelets, and others, all available to be linked to passively collected smartphone data on movement and location. This provides the near-term promise of being able to accurately and continuously measure the emotional state of populations as the encounter either the joys or hardships of daily life. This will prove invaluable to city planners and architects, and more broadly to designers of user experiences in a variety of environments (think museums, airports, shopping malls, hospitals – use your imagination). The emotion revolution has begun!

The dream of being able to understand what people are feeling is becoming a reality.

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To read more from Jeremy, check out his blog post:

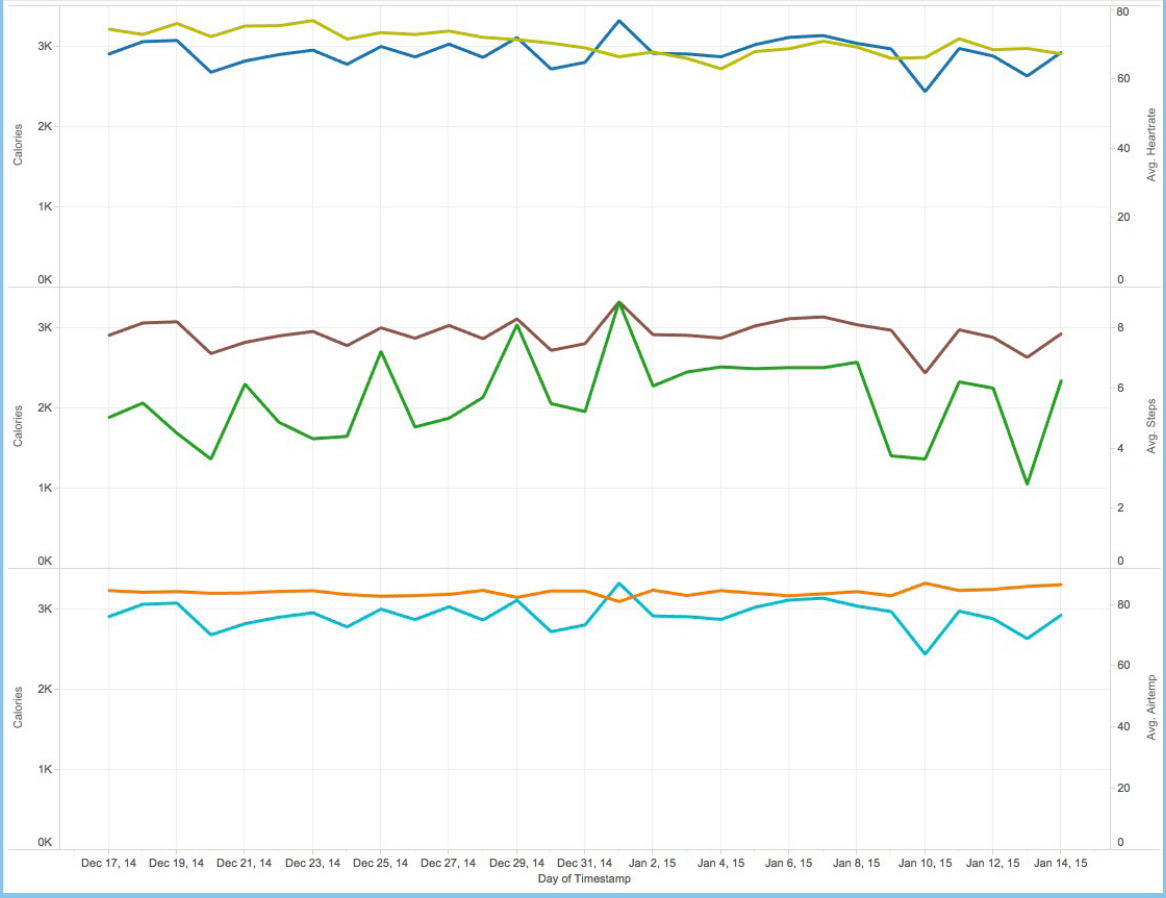
CHRISTOPHER PENN

@cspenn

Christopher Penn talks about his cool wearable and how data can be exported to give more context to the numbers.

One of the most powerful trends right now in data collection is around the quantified self movement. This is where you track lots of different data points. I own, for example, a Basis wristwatch that tracks things like steps, heart rate, calories, etc. The watch itself comes with a halfway decent web reporting system that gives you broad information about how you're doing. This is akin to many marketing analytics packages giving you pre-defined reports and visualizations. It's a good place to start, but what if you really want to dig in? For one, you can feed it all into your marketing analytics tools, from simple Excel spreadsheets to big data tools like Hadoop, MapReduce, and Watson.

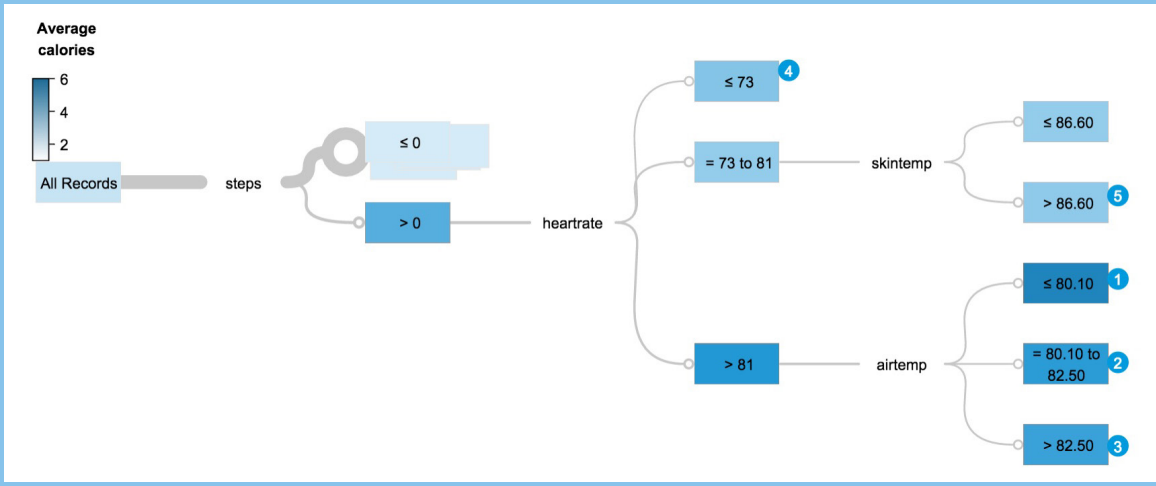
For example, here's a simple visualization of calories burned versus heart rate (top chart), steps taken (middle chart), and air temperature (bottom chart):



Calories burned versus heart rate

You don't have to be a data scientist to figure out what you're looking at. There's an almost perfect correlation between steps taken and calories burned, which makes base logical sense. The more you move, the more energy you use, the more calories you burn.

Here's an example of what happened after asking IBM Watson Analytics what influences calories burned.



IBM Watson Analytics Analysis

Watson Analytics obviously picked out that steps matter most, the first part of the decision tree. It then picks out heart rate as the second factor that influences calories burned. What's interesting is how the tree splits off there. For standard "office life", where my heart rate is between 73 and 81, skin temperature matters. Being warmer is slightly better. For exercise periods, air temperature matters, and there, colder seems to be slightly better.

Are these causal?

To hear more from Chris, check out this video: ***To find out more, read my blog post:***

14) Determine your career path. Sites like Monster, CareerBuilder and LinkedIn are go-to resources for job seekers at various stages of their careers – from right out of college, to making a switch, to finding a company they'll retire with. But these sites are typically more advantageous for recruiters looking to match resumes and skills with job descriptions.

In the not-so-distant future, it will be possible for job hunters to input their own data, including skills and experience, of course. But there will also be strategies for providing intangible "soft skills" that employers crave. You'll be more in control of your career path because you're matching both professional and personal traits – so you're more likely to find happiness and job satisfaction.

Jessie Liu discusses the future of data in job matching.

JESSIE LIU

@jessiecliu

Using data, artificial intelligence and a vast taxonomy, it is already possible to match an employer's specific requirements with a job seeker's experience, skills and preferences (job type, location, etc). This is known as Real-Time Job Matching. In the near future, of course, it will also be possible to include "soft skills" or personality fit into the job matching algorithm. Thus, instead of using a simplistic keyword count search, this job matching algorithm increases your odds of finding a job that best matches your values and skill set.

To read more about job matching, head over to Jessie's blog post:

EMILIO FERRARA

@jabawack

Emilio Ferrara has personal experience matching job traits to success in the fashion industry.

Predicting the future of professional careers with big data is becoming reality. One example is provided by a recent study my collaborators and I conducted, demonstrating that it is possible to combine social media data with other web data-sources to predict the success in the multi-billion-dollar industry of fashion. To understand the ingredient of success in the modeling business, the team collected millions of posts from Instagram, the popular image-sharing platform, and physical and professional information from a comprehensive online fashion database, to characterize the attributes of popular fashion models.

By using big data analytics and machine learning, we were capable of designing a forecasting algorithm that correctly predicted most of the new popular models who appeared in 2015. A strong social media presence was found to be as important as being under contract with a top professional agency, and even more important than perfectly matching the aesthetic standards sought after by fashion industry.[1]

[1]"Style in the Age of Instagram: Predicting Success within the Fashion Industry using Social Media" by Jaehyuk Park, Giovanni Ciampaglia, and Emilio Ferrara. http://dl.acm.org/citation.cfm?id=2820065

To hear more from Emilio, check out this video:

15) Climb the career ladder. Data can reveal the secrets of getting to the top in the corporate world as well. There are lots of seminars, books, presentations and other sources where you can learn about leadership skills. But data can tell us so much more about the common characteristics of great business leaders, such as their educational background, degree and first job post-graduate. You'd probably be surprised to learn that the CEOs of many top corporations didn't go to Harvard or Yale; the head of Cisco went to Gonzaga, while Signature Financial's top dog graduated with a degree in political science.

What does this data mean for your career? The playing field is wide open and there are multiple paths to the top. Spend time in different areas of the business instead of being an expert in just one function. And as it relates to some specific careers, data can be very useful:

- **Sales and Marketing:** Data extracted from the 5W's and H of journalism can help you identify and target customers more effectively:
  - Who is your audience?
  - What are their interests, needs and goals?
  - Where do they live, work, play and hang out online?
  - When will they be making purchasing decisions?
  - Why do they need your company's offerings?
  - How do your customers like to consume information about your products?

- **Human Resources:** HR departments and recruiters rely on data to fit the right candidate with the right position. By looking at key data fields, they can filter down a handful of qualified job seekers from thousands. HR pros take details like education, work experience, location and other demographics to make their job easier. Data can even tell you which employees are outperforming others, which ones might be ready for advancement planning – and even those team members most likely to steal.

- **Data Analysis:** Why not climb the corporate ladder by looking into a career in data? Big data is big. *Harvard Business Review* calls data science the "sexiest" job of the 21st century and it's showing huge promise for those looking to switch careers or get started with a rewarding position. You could be the one assessing the 2.5 petabytes (yes, that's 1,000 terabytes) of data collected from Walmart's 1 million sales transactions per hour. Fan of video? Maybe you'd prefer to analyze the more than 48 hours of content uploaded to YouTube every minute globally.

If only data could go so far as to tell you the job you're best suited for! Well, William McKnight says it can.

WILLIAM MCKNIGHT

@williammcknight

Job Placement: Through well-done Q and A backed by iterative data analysis, people can be well placed into jobs and positions they are ideally suited for.

In the future, DNA analysis could lead to ideal placements. At some level, we can skip all other data because the DNA is definitive about, well, just about everything.

We are a ways off from DNA harvesting and understanding. It's being worked on, but know that the commensurate technology is there to do anything a company wants to do with today's data.

With Q and A backed by iterative data analysis, people can be placed into jobs they are suited for.

Click to Tweet

To hear more from William, check out this video:

BOB HAYES

@bobehayes

And if you want to make data a career, Bob Hayes has some advice.

If you choose data science as a career option, you might want to focus on becoming proficient in one of the particular skill areas that define data science:

1) Subject matter expertise
2) Technology/programming
3) Statistics/math

Data professionals typically specialize in only one of these three areas. The data scientist who knows everything across the three skills is rare/non-existent. By specializing in a particular skill area, you are able to work with other data professionals with expertise in complementary data science skills to ensure success of your data-intensive projects. Companies rely on different types of data scientists to build up their data science capabilities.

To hear more from Bob, check out this video:

To find out more about data science careers, read Bob's blog post:

16) Forge more and better relationships. It's not such a stretch to discover that something seemingly impersonal as data can actually help improve our personal relationships. Here is how.

- **Dating Platforms:** You know these applications and there's a good chance you've used them to meet potential partners. And you can certainly see how data weighs into presenting suitable candidates that users are likely to be compatible with. Data is not going to match you up with a heavy metal lover if you're into classical music, and it won't connect a gluten-free enthusiast with a bakery owner.

- **Social Groups:** Much like data can align you with the ideal date, it can be used to put you in touch with people who share your interests. Personal relationships are forged through common denominators and data helps you identify those individuals that you'd like to spend time with.

- **Entertainment:** How often do you watch a video on YouTube or Vimeo simply because one of your social media connections gave it a thumbs up? Do you ever listen to Spotify tunes based upon the listening habits of others? Entertainment preferences are nothing more than data collected and analyzed to present you with choices that you're likely to love.

We're all active players in the game, collecting, interpreting and forming opinions about data. We're not just passive collectors; we use data to better connect with the people in our lives.

At their core, our relationships are all about the conversations we're having with others. When you position data at the forefront of these discussions, you become a better listener – which is especially useful to marketers. Christopher Penn explains.

CHRISTOPHER PENN

@cspenn

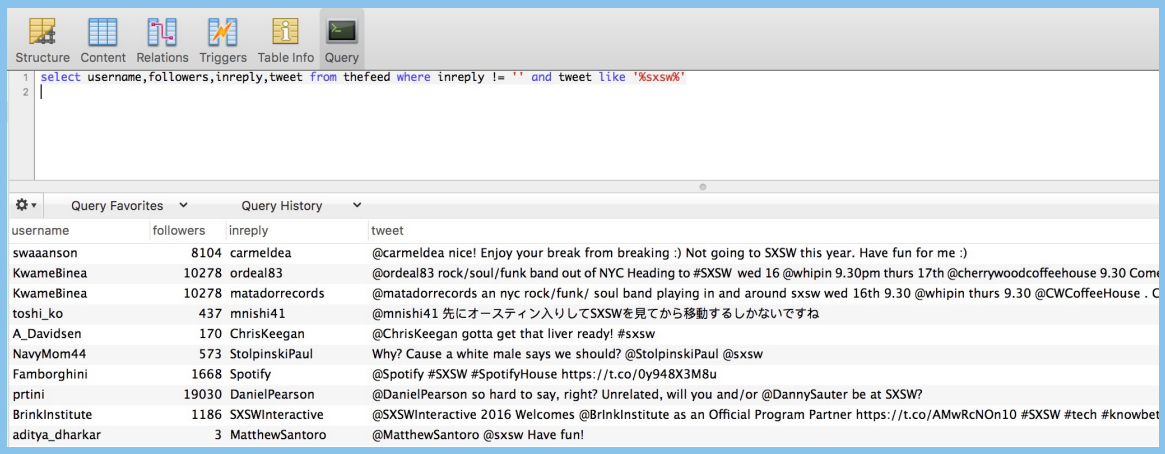
We all struggle to identify influence in the context of conversation. We see who has the biggest audience, who has the highest number of shares or retweets – that's table stakes. What we cannot easily visualize are the networks of conversation people have about a topic.

Wouldn't it be valuable to know who talks to who? If we were running an event, we'd certainly want to know who the resident experts are – especially if they're niche influencers?

Answering these questions requires the use of network mapping tools. Technologists have had access to network mapping tools for years, but it's difficult to generate clean data, and they aren't the easiest to use.

When IBM announced Watson Analytics had gained the ability to build network maps from any data source, I rejoiced. Watson Analytics already accepts common data formats like CSV files and Excel spreadsheets, formats that specialized tools do not. To use it, all you need is data that contains conversations with distinct entities.

For example, here's a collection of tweets about South by Southwest (SXSW). I've separated the respondents into a username and who the message was in reply to:



Structure Content Relations Triggers Table Info Query

```
1 select username,followers,inreply,tweet from thefeed where inreply != '' and tweet like '%sxsw%'
2
```

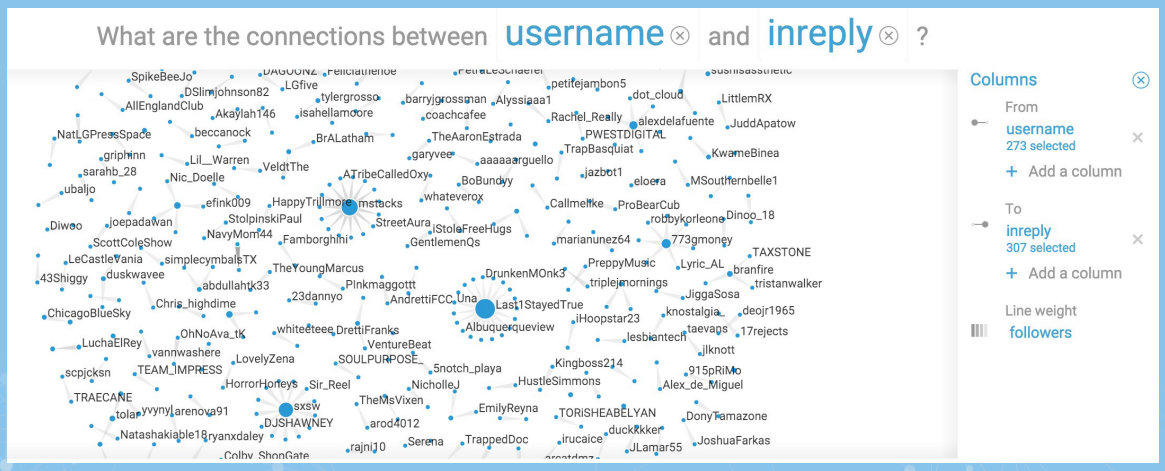
Query Favorites Query History

username	followers	inreply	tweet
swaaanson	8104	carmeldea	@carmeldea nice! Enjoy your break from breaking :) Not going to SXSW this year. Have fun for me :)
KwameBinea	10278	ordeal83	@ordeal83 rock/soul/funk band out of NYC Heading to #SXSW wed 16 @whipin 9.30pm thurs 17th @cherrywoodcoffeehouse 9.30 Come
KwameBinea	10278	matadorrecords	@matadorrecords an nyc rock/funk/ soul band playing in and around sxsw wed 16th 9.30 @whipin thurs 9.30 @CWCoffeeHouse . C
toshi_ko	437	mnishi41	@mnishi41 先にオースティン入りしてSXSWを見てから移動するしかないですね
A_Davidsen	170	ChrisKeegan	@ChrisKeegan gotta get that liver ready! #sxsw
NavyMom44	573	StolpinskiPaul	Why? Cause a white male says we should? @StolpinskiPaul @sxsw
Famborghini	1668	Spotify	@Spotify #SXSW #SpotifyHouse https://t.co/0y948X3M8u
prtini	19030	DanielPearson	@DanielPearson so hard to say, right? Unrelated, will you and/or @DannySauter be at SXSW?
BrinkInstitute	1186	SXSWInteractive	@SXSWInteractive 2016 Welcomes @BrinkInstitute as an Official Program Partner https://t.co/AMwRcNOn10 #SXSW #tech #knowbet
aditya_dharkar	3	MatthewSantoro	@MatthewSantoro @sxsw Have fun!

Click for a larger version

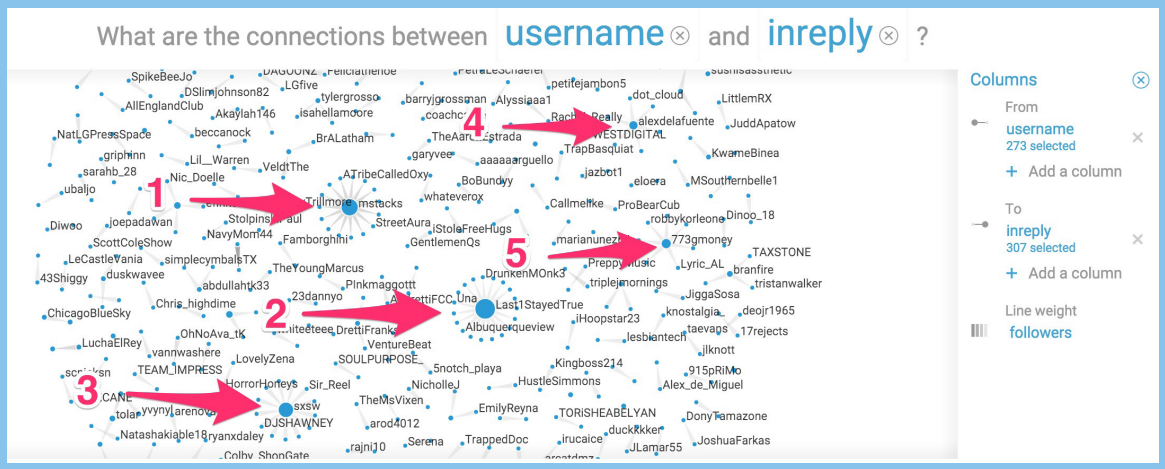
This raw data has some useful facets to it; knowing who is talking to whom and the audience size are helpful facts. Information in this format is not intuitive; we have the data but cannot analyze it to know what happened. Without analysis, we cannot create insights.

I loaded this same data into Watson Analytics, which produced this lovely exploration:



Click for a larger version

What do we see in this map? Here's an annotated version:



Click for a larger version

Clusters 1, 2, and 3 are well-defined conversation hubs. The user account in the middle of the hub is a high-conversation account, an account that many people talk to. If we were using this analysis for influencer identification, we'd want to investigate these accounts carefully.

Clusters 4 and 5 are nascent conversation hubs. These aren't as popular, but we should make note of them in case they continue to grow. If we see them expand in subsequent network maps, we'll know these are trending influencers and should interact with them .

These are actual conversations happening, as opposed to simple likes and retweets. This is an important distinction, especially for an event like SxSW. Having influencers who are retweeted and shared is important; having influencers who participate actively in conversations to change minds and set opinions is vital. Standard social media analytics provides the former quite capably; network mapping with Watson Analytics helps us achieve the latter, creating a comprehensive, powerful influencer program.

We use network mapping to visualize any set of interactions between entities. We could use it to find the most malfunctioning part of an IoT system. We could use it to identify which pages on our website send the most traffic to other pages. We are limited only by our imagination and data quality.

Give network maps a try today in Watson Analytics!

To hear more from Chris, check out this video: 

To read more about this, check out Chris' blog post: 

SECTION 3

Make a Difference to Others

17) Do good in the world. Data makes the world a better place for us now and future generations in the years to come.

- **Tracking Abandoned Properties:** Old, decrepit buildings are an eyesore and dangerous to those who encounter them. That run-down two story brownstone with the rickety porch looks like a playground to children seeking adventure. Many municipalities use data to track abandoned properties and secure them to prevent accidents.

- **Public Transportation:** Your rush-hour commute is made more tolerable with analytics that tell public transportation strategists how to schedule subways, buses and commuter rail lines. Data is the reason you have six express trains leaving between 7-8AM, and only one or two from 10AM until 4PM.

- **Bike and Ride Share Programs:** First introduced in major cities, bike and ride sharing programs get you where you need to be – with less of a carbon footprint and harmful emissions. Data is used to plan placement and scheduling of vehicles, ensure they're in the right spot where and when you need them.

- **Crime Forecasting:** Neighborhood Watch programs make your community safer and they facilitate relationships between neighbors and law enforcement. Data lends a hand by providing forecasting on the types and times of criminal activity, so neighbors know to keep an eye out and police have your back.

Data can even go beyond localized crime forecasting to tell us more about global social issues. Emilio Ferrara believes the information gained from social media conversations can help predict and avoid hazards.

EMILIO FERRARA

@jabawack

Big data analytics finds many applications in the quest to improve our world. One such example is the research I conducted through my work as a Research Assistant Professor at the University of Southern California. I analyzed big data coming from platforms like Twitter and Facebook, in order to detect and predict forms of abuse that can potentially harm us and our society.

As social media platforms become more pervasive in our life, in fact, new ways to perpetrate crimes and illicit activities arise: terrorist organizations like ISIS, for example, use Twitter as a propaganda platform, to radicalize and recruit new adepts all over the world. The timely identification of such campaigns is therefore vital to keep social media a safe place: My work explores machine learning and human computation to address this and many similar other problems, including the detection of social bots that manipulate the stock market, the analysis of people's reactions in emergency situations like the Ebola crisis in 2014, and the identification of rumors in the context of political campaigns.[2] My work is just one of many examples of academic research that illustrates the immense capabilities that big data analysis brings to us to do good in our world and in our society.

[2] "Manipulation and abuse on social media" by Emilio Ferrara: http://dl.acm.org/citation.cfm?id=2749283

To hear more from Emilio, check out this video:

18) Change preconceived notions. We approach each day with certain expectations about how things will happen, which has an impact on our perceptions of the world around us. The problem is that our own senses trick us into negative bias unless we examine, question and drop preconceived notions that hold us back. That scruffy looking man on the park bench is a company CEO and philanthropist, but the well-dressed woman on the elevator is being investigated for corporate fraud.

Data gives a neutral, comprehensive picture of certain situations, so we're not limited by partiality. Data sheds new light at times where bias would otherwise takeover, like:

- **The Know It All:** Been there, done that. The Know It All forms conclusions based on previous experiences which may not even be relevant.
- **The Victim:** This person got burned in the past and is determined to never get stuck in that position again, despite all signs pointing to different conclusions.
- **The Professor:** If The Professor reads it, it must be true – never mind the fact that he or she is simply extracting information without context to draw conclusions.
- **The DIY'er:** This independent spirit sees everything as a task they can totally do without professional help – or maybe with just a little guidance.

Data is the Great Equalizer in kicking these personalities and their preconceived notions to the curb. It reveals the meaning behind the numbers and opens your eyes to new experiences and impressions you might have otherwise been blind to.

19) Change healthcare. Is there a better way to make a difference for others than by improving healthcare? Data has changed the way we handle healthcare and approach treatment.

- **Prevention of Diseases:** Curing an ailment is hands-down more expensive and traumatic than preventing disease in the first place. Data collected from thousands of other patients can be used to identify in others the red flags often associated with certain conditions. Healthcare professionals look at data from an array of sources (insurance records, genetic demographics – even the wearables mentioned in Section 2 above) to develop a patient-specific picture that helps people live longer, with better quality of life.

- **Development of Treatments:** Your physician doesn't pick a diagnosis and treatment out of a jar. The prescription you receive is the end result of countless data compiled from other patients with similar conditions who were given treatments in clinical trials.

- **Prevention of Epidemics:** The "zombie apocalypse" may be preventable by looking at data, as it's already helped fight the spread of disease in Africa. Mobile phone GPS technology has proven useful in tracking population movements, which assist healthcare professionals and government agencies in predicting Ebola virus infection. Data tells us where treatment centers should be positioned and where travel restrictions should be implemented, if necessary. Here's what William McKnight says: "Data not only tells us how epidemics are spreading, it also tells us where to put sensors to detect contamination detection. Accidental or malicious introduction of a contaminant into resource distribution systems could potentially have severe health effects on a population, as well as social and economic impacts."

- **Quicker Access to the Right Doctor:** William McKnight says, "We have all had the experience of having to wait some time to get certain treatments. This is often the case of there simply being a backlog to services. Better access (or perhaps collaboration of data) would expedite treatment options."

EMILIO FERRARA

@jabawack

Data-driven healthcare enables the collection of huge amounts of information that would otherwise be siloed – because medical records are controlled by a different doctor, hospital or clinic. We're not there yet, but data can help us get there.

Emilio Ferrara expands upon the role of data in healthcare.

A different spin on healthcare research comes from the study of big data produced everyday by millions of individuals on online social networks. In fact, the content we all generate online, and the emotions therein expressed, may impact others' moods. Researchers in industry and academia alike are exploring these phenomena by means of big data analysis: a recent experiment carried out by Facebook, for example, illustrates that users become more inclined to post negative status updates if their friends also show negative attitudes.[3] My research studied millions of tweets generated by thousands of Twitter users over the course of a month during 2014, and demonstrated that emotion are indeed contagious and spread on the social network much like how the flu spreads in the real world.[4]

On the bright side, my analysis showed hat positive emotions are much more "infectious" than negative ones, and on average social media users are more inclined to show positive attitudes and moods. These findings have important healthcare implications: in fact, if social media platforms can tune the contents displayed to their users to prioritize positive messages, this will have an immediate beneficial effect on the mental and physical well-being of the users.

My work and similar research therefore poses the basis to tailor personalized interventions for individuals with mental illnesses or mood disorders, based on their online activity and behavior.

The content we all generate online, and the emotions therein expressed, may impact moods of others.

Click to Tweet

[3] "Experimental evidence of massive-°©scale emotional contagion through social networks" by A. Kramer and collaborators. http://www.pnas.org/content/111/24/8788.abstract

[4] "Measuring Emotional Contagion in Social Media" by Emilio Ferrara and Zeyao Yang: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0142390

To hear more from Emilio, check out this video:

20) Study the complications of diseases. Disease outbreaks impact the entire globe and it's not just a human health crisis: Epidemics carry a hefty price tag, as the affected West African countries have invested $32.6 billion to fight the spread of the Ebola virus. The World Bank has also committed $400 million to the cause. How can data help us reduce the human and economic impact of deadly diseases?

HealthMap.org is a platform that takes data from public health, media and other sources to deliver real-time news and alerts about outbreaks. The site detected the early warning signs of the Ebola epidemic a full nine days before the World Health Organization made it front page news. Co-founders Clark Freifeld and John Brownstein (developer and epidemiologist, respectively) recognized the need to organize and structure the huge amount of outbreak-related data available online. Without structure, data does nothing to help decision making – especially when time is of the essence.

The platform consists of a web crawler that continuously scans the Internet and collects data from thousands of channels, including the media, health organizations and government agencies. With filtering technology, HealthMap can pinpoint threats down to the specific location.

SECTION 4

What Else Can You Do with Data? Things You Probably Never Thought of

21) Get better at predicting game outcomes. Ask any fan of any sports team, "Who will win the big game?" Most will say their favorite team is going to hoist the victory torch, no matter how lopsided the stats or score. The problem is that so many fans are driven by emotions when it comes to predicting game outcomes – not facts. Through the use of data, numberFire is changing the game.

It's one of a few applications that combine analytics with algorithms to convert misleading unstructured data into predictions about game outcomes. As a company, numberFire submitted a bracket to the 2012 March Madness tournament and not only correctly predicted the winner (Kentucky), but also placed in the top 1% of all submissions. With data, you improve your betting odds. So lesson learned: Show you're the biggest fan by painting your face, NOT by placing your bets based on emotion.

Check out Emilio Ferrara's real-life story about deriving football predictions by monitoring social media conversations.

EMILIO FERRARA

@jabawack

Big data analysis recently found home in yet another domain of application: the science of forecasting sports games outcomes. My collaborators and I scanned through millions of Twitter feeds during the 2014 FIFA World Cup and the following 2014-15 European football season. We created advanced forecasting models based on social media content analysis that are over 80% accurate at predicting the outcome of hundreds of football games. My group therefore designed a betting strategy based on these predictions and demonstrated how to beat the bookmakers with very large margins, obtaining an average profit above 10%! The prediction system is based on real-time sentiment analysis to leverage social media data generated before the games by the large crowd of fans who express their emotions and expectations about the upcoming games.[5]

[5] "On Predictability of Rare Events Leveraging Social Media: A Machine Learning Perspective" by Lei Le, Emilio Ferrara, and Alessandro Flammini. http://dl.acm.org/citation.cfm?id=2817949

To hear more from Emilio, check out this video:

22) Dominate your fantasy sports leagues. Predicting the winner and loser of a game is just the start for data's role in sports. NumberFire also takes your fantasy sports teams to the next level in merging algorithms with numbers. The app boasts that its use of data delivers a 31% higher chance of winning fantasy leagues across all professional sports and outdoes expert projections a whopping 93% of the time.

Sports data gaming is just starting to hit its stride, though the demand for analytics in fantasy leagues has existed for a while. It's only logical that data would find its way into this realm eventually; stockbrokers and traders have been using complex models and trading algorithms for decades. NumberFire's founder and CEO, Nik Bonaddio, likens sports data to finance: Games are all about the numbers – box scores, running vs. passing yardage, batting averages and free throw percentages. It's not such a stretch to take data to sports.

23) Improve your microbrewing. It's the end of the list and time to celebrate! Luckily, data can help us with that, too. What started as a hobby turned into a profitable startup for Jason Cohen, who developed the program Gastrograph to help microbreweries – and himself – create a better product. As a craft beer aficionado, Cohen was frustrated when his batches didn't always turn out to his liking; as a data scientist, he knew there must be a way to collect data and use it to improve his home brews.

Gastrograph can pinpoint flaws in the brewing process or ingredients with just a handful of tastings, so there's no need to get tipsy trying to improve your batch. The program works by identifying 24 different taste attributes common to different beer styles. A user downloads the app and creates a profile based upon the 24 flavors. Data captured by Gastrograph is submitted to a data center, where artificial intelligence and algorithms "learn" about preferences. Once the data is crunched, it's available to a user on a dashboard, where common flaws are revealed. For instance, a flavor profile that's akin to fresh-cut grass has too much of a certain compound – which arises when the hops are stale.

SECTION 5

IBM Watson Analytics Has Your Back

And you didn't think there were great reasons to get excited about data. Now that your eyes are opened and you can see all that it can do, the opportunities are limitless – right? Not so much...

It's one thing to collect data; it's quite another to get meaning from it. Data needs context to give the numbers cognitive capabilities. You need to identify trends and gain insight to make it worth collecting. Data talks, but you need a microphone to hear what it's saying. So, back to the spreadsheet approach, right?

Thanks to Watson Analytics, there's no need for manual review of the boatloads of data you're trying to make sense of.

What is Watson Analytics? Self-serve, easy access, automatic data analytics. IBM launched Watson Analytics with a goal to deliver advanced analytics functionality without the complexity of other kludgy solutions. Unlock the value of the data you've gone to great lengths to collect – or take advantage of external data sources you didn't even know existed. Interact with data conversationally, and with reason and purpose, to get answers and insights that can take your business to new heights:

- *Natural language query* enables you to explore your data and find new associations and insights in plain language.
- *Compelling visualizations* are automatically created just for you in one click to help you make sense of data and tell more powerful stories.
- *Predictive analytics* automatically surface the factors behind your outcomes.
- *Data refinement* cleanses, shapes, converts and combines data from multiple files and formats to make your data stories more meaningful and relevant.

- *Expert Storybooks* help you learn, understand and evaluate data in ways you never thought possible. Our expert storytellers bring you into the experience, so you can gain the most relevant data to explore patterns and relationships.

- *Watson Analytics for Social Media* analyzes social media data to offer more than simple listening. Take the pulse of your audience to better understand their needs and apply what you've learned to your business data analysis.

- Various Versions to Suit Your Needs: What will you do with Watson Analytics? No matter what type of usage, the analytics tools will suit your needs.

FREE

Use it for free and get access to cognitive, predictive and visual analytics.

PLUS

All the functionality of the free version, plus access to larger data sets and storage capabilities.

PROFESSIONAL

The enterprise level edition takes the Free and Plus tools, with the ability to add more users for collaboration efforts and more data connectors.

Get answers, gain insights and make confident, educated decisions within minutes.

SECTION 6

Summary

Data truly is exciting when it speaks to you in a language you can understand. Watson Analytics is the translation tool that turns information into visualization, presented to you in a format that doesn't require an advanced degree in statistics to understand. Data is your trusted business resource, your personal assistant and do-good supporter. But without analytics tools, valuable data is money left sitting on the table.

SO WHAT ARE YOU WAITING FOR?

Register to try **Watson Analytics for free** today and start putting your data to work for you.