



# DATA STREAK

A monthly digest on all things Data

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# WHAT IS BIG DATA?

## CHARACTERISTICS, TYPES, BENEFITS & EXAMPLES

Abhinav Rai  
Data Scientist, upGrad

Tech Article



Lately the term ‘Big Data’ has been under the limelight, but not many people know what is big data. Businesses, governmental institutions, Health Care Providers and financial as well as academic institutions, are all leveraging the power of big data to enhance business prospects along with improved customer experience. IBM maintains that businesses around the world generate nearly 2.5 quintillion bytes of data daily! Almost 90% of the global data has been produced in the last 2 years alone.

So we know for sure that big data has penetrated almost every industry today and is a dominant driving force behind the success of enterprises and organizations across the globe. But, at this point, it is important to know what big data really is.

### What is Big Data?

According to Gartner -

“Big data” is high-volume, velocity, and variety information assets that demand cost-effective, innovative forms of information processing for enhanced insight and decision making.”

This definition clearly answers the “What is Big Data?” question. Big data refers to complex and large data sets that have to be processed and analyzed to uncover valuable information that can benefit businesses and organizations. Watch this video to know more.

Play Now



- It refers to a massive amount of data that keeps on growing exponentially with time.
- It is so voluminous that it cannot be processed or analyzed using conventional data processing techniques.
- It includes data mining, data storage, data analysis, data sharing, and data visualization.
- The term is an all-comprehensive one including data, data frameworks, along with the tools and techniques used to process and analyze the data.



## Types of Big Data

Now that we are on track with what is big data, let's have a look at the forms of big data.

### Structured

By structured data, we mean data that can be processed, stored, and retrieved in a fixed format. It refers to highly organized information that can be readily and seamlessly stored and accessed from a database by simple search engine algorithms. For instance, the employee table in a company database will be structured as the employee details, their job positions, their salaries, etc. will be present in an organized manner.

### Unstructured

Unstructured data refers to the data that lacks any specific form or structure whatsoever. This makes it very difficult and time-consuming to process and analyze unstructured data. Email is an example of unstructured data.

### Semi-structured

Semi-structured data pertains to the data containing both the formats mentioned above, that is, structured and unstructured data. To be precise, it refers to the data that although has not been classified under a particular repository (database), yet contains vital information or tags that segregate individual elements within the data.

### Characteristics of Big Data

Back in 2001, Gartner analyst Doug Laney listed the 3 'V's of Big Data – Variety, Velocity and Volume. These characteristics, isolatedly, are enough to know what is big data. Let's look at them in depth:

#### 1) Variety

Variety of Big Data refers to structured, unstructured, and semistructured data that is gathered from multiple sources. While in the past, data could only be collected from spreadsheets and databases, today data comes in an array of forms such as emails, PDFs, photos, videos, audios, SM posts, and so much more.

#### 2) Velocity

Velocity essentially refers to the speed at which data is being created in real-time. In a broader prospect, it comprises the rate of change, linking of incoming data sets at varying speeds, and activity bursts.

#### 3) Volume

We already know that Big Data indicates huge 'volumes' of data that are being generated on a daily basis from various sources like social media platforms, business processes, machines, networks, human interactions, etc. Such large amounts of data are stored in data warehouses.



## Advantages of Big Data | Features

One of the biggest advantages of Big Data is predictive analysis. Big data analytics tools can predict outcomes accurately, thereby, allowing businesses and organizations to make better decisions, while simultaneously optimizing their operational efficiencies and reducing risks.

By harnessing data from social media platforms using big data analytics tools, businesses around the world are streamlining their digital marketing strategies to enhance the overall consumer experience. Big data provides insights into the customer pain points and allows companies to improve upon their products and services.

Being accurate, big data combines relevant data from multiple sources to produce highly actionable insights. Almost 43% of companies lack the necessary tools to filter out irrelevant data, which eventually cost them millions of dollars to hash out useful data from the bulk. Big data tools can help reduce this, saving you both time and money.

Big data analytics could help companies generate more sales leads which would naturally mean a boost in revenue. Businesses are using Big Data analytics tools to understand how well their products/services are doing in the market and how the customers are responding to them. Helping them understand where to invest their time and money.

With big data insights, you can always stay a step ahead of your competitors. You can screen the market to know what kind of promotions and offers your rivals are providing, and then you can come up with better offers for your customers. Also, big data insights allow you to learn customer behavior to understand the customer trends and provide a highly 'personalised' experience to them.



# 1

## Guesstimates

How can you predict total withdrawals from an ATM for a particular day



## Who is using Big Data? | 5 Applications

**Big data users know better. Let's look at such industries:**

### 1) Healthcare

Big data has already started to make a big difference to the healthcare sector. With the help of predictive analytics, medical professionals and HCPs are now able to provide personalized healthcare services to individual patients. Apart from that, fitness wearables, telemedicine, remote monitoring – all powered by Big Data and AI – are helping change lives for the better.

### 2) Academia

Big data is also helping enhance education today. Education is no longer limited to the physical bounds of the classroom – there are numerous online educational courses to learn from. Academic institutions are investing in digital courses powered by big data technologies to aid the all-round development of budding learners.

### 3) Banking

The banking sector relies on big data for fraud detection. Big data tools can efficiently detect fraudulent acts in real-time such as misuse of credit/debit cards, archival of inspection tracks, faulty alteration in customer stats, etc.

### 4) Manufacturing

According to TCS Global Trend Study, the most significant benefit of big data in manufacturing, is improving the supply strategies and product quality. In the manufacturing sector, big data helps create a transparent infrastructure, thereby predicting uncertainties and incompetencies that can affect the business adversely.

### 5) IT

One of the largest users of big data, IT companies around the world are using big data to optimise their functioning, enhance employee productivity, and minimize risks in business operations. By combining big data technologies with machine learning and AI, the IT sector is continually powering innovation to find solutions even for the most complex of problems.

# 5 WAYS INTELLIGENT AUTOMATION HELPS YOUR BUSINESS GROW FASTER



Intelligent automation is the amalgamation of two advanced technologies— Artificial Intelligence (AI) and Robotics Process Automation (RPA). In layman terms, that means automating processes in a way that they keep learning and improving based on the past performance data.

But how does that matter to you and why should you consider investing in intelligent automation? We will answer these questions and discuss the benefits of intelligent automation in this post.

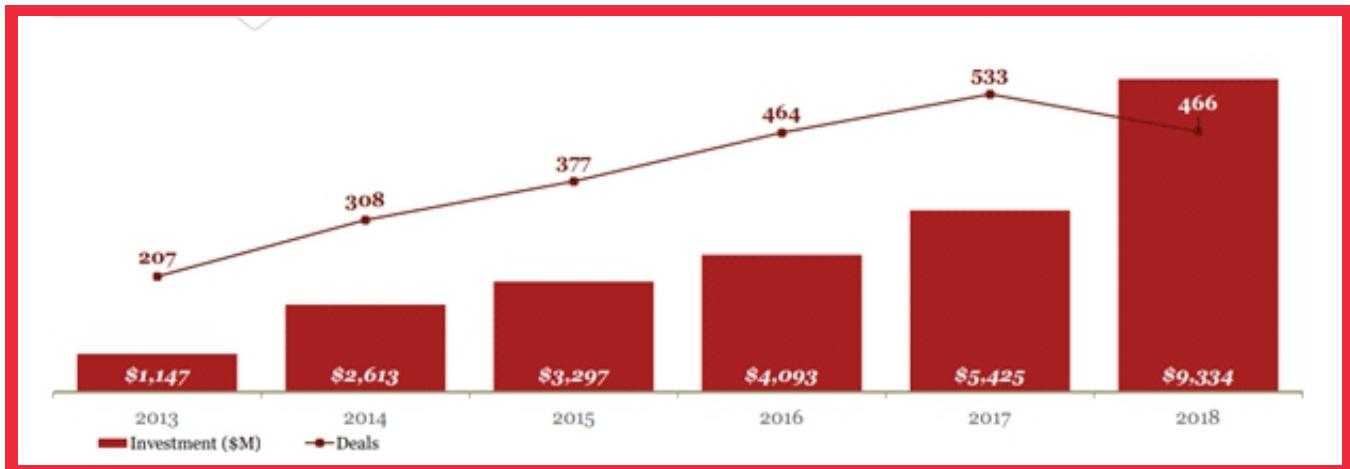
## The Business Case for Intelligent Automation

The practical applications of intelligent automation can be seen in numerous business scenarios today. The application of Natural Language Processing (NLP) and machine learning can be seen in intelligent, conversational chatbots that companies are now using. Machine vision's applications are being tested and deployed in the retail sector. The role that these technologies will play in the future will be even greater.

The increase in the amount of venture capital funding in AI and robotics related ventures is a testament to the growing importance of these technologies. According to a recent PwC report, the total VC funding for AI-related ventures in the US has grown at a CAGR of 52.09% during 2013-2018.



**Shane Barker**  
Digital Marketing Consultant



Source: PwC MoneyTree Report Q4, 2018

This clearly shows how much companies are investing in AI and related technologies as they recognize the role it can play in the growth of their businesses.

But why is it that companies are willing to invest millions of dollars in intelligent automation? What makes the combination of AI and robotics so powerful that it is predicted to change the entire landscape of operations and process management in companies?

Let's take a look at the answers to these questions and the potential benefits that businesses can derive using intelligent automation.

## The Benefits of Intelligent Automation

### 1. It Reduces Human Error

Humans are prone to making errors because they can get affected by a lot of external factors like mood, health issues, distractions, etc. Machines, however, do not get affected by these and can complete the same tasks with 100% accuracy.

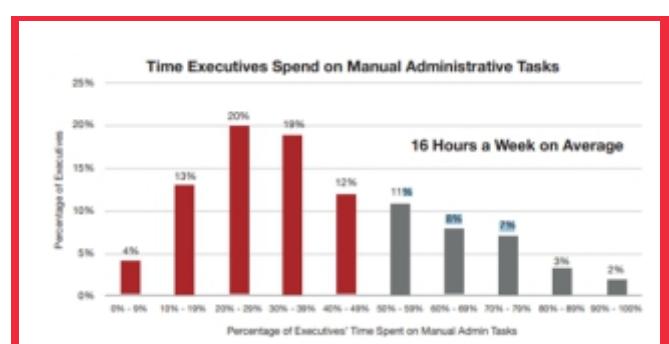
Moreover, an automated process is a lot more reliable than a manual process. No matter what, you can always count on an automated system to deliver the exact same results every single time. There are no variations in processes and they function more smoothly and with higher accuracy.

Thus, automated systems and processes can help you reach unprecedented levels of quality and reliability and take your operational efficiency to the next level.

### 2. It Improves Productivity

Automating repetitive, tedious tasks that take up a majority of employees' time can give them the freedom to focus on more vital tasks. This will result in overall productivity improvement as automation can complete these tedious tasks faster and with higher accuracy.

According to a recent survey, employees spend an average of 16 hours per week on administrative tasks.



Imagine, how much more they can achieve if they are freed of these time-consuming, mundane tasks and can focus on something else. Every business has some tasks that can be easily automated. All you need to do is identify such tasks and use intelligent automation to complete those tasks.

Take invoice processing for example. The process is tedious and monotonous and is prone to errors, when done manually. However, with accounts payable automation software, like that provided by PurchaseControl, you can automate your invoice processing.

It provides accurate invoice matching before a payment is processed. It also provides an end-to-end eprocurement solution, freeing up your employees to take on more strategic roles. This makes the process faster and more reliable resulting in overall productivity and efficiency improvement.

### 3. It Helps Reduce Costs

Using intelligent automation to perform repetitive tasks means that you will require fewer employees. And, in the long term, the cost of deploying automation is much less than the cost of deploying human resources.

The cost of automation is essentially a one-time cost with a very low operating cost. So, once deployed, it can keep functioning for years without requiring too much financial investment.

Also, since automation helps you complete tasks faster and with practically no errors, it helps you get more done by using fewer resources. This automatically translates into increased operational efficiency and hence cost optimisation.

Keep an Eye Out for the Next Big Thing: Machine Learning

### 4. Lets You Run Your Business Round-the-Clock

Intelligent automation helps you create automated systems and processes that can work continuously, without requiring any breaks. Think of this like a virtual worker that works 24x7, all year round, without requiring any supervision. Now, isn't that the dream of every business owner?

However, even intelligent automated systems need to be regularly maintained and updated to ensure their smooth functioning. Even then, intelligent automation can enable you to run your business round-the-clock with great efficiency and minimal cost.

### 5. It Enhances Customer Service

Intelligent automation can enhance your business' customer service delivery in two ways. First, it can create automated systems that can handle customer needs round-the-clock and provide uninterrupted customer service.

Second, it can enable employees to focus less on repetitive and mundane tasks and focus more on delivering better customer service.

A lot of businesses now use conversational, AI-powered, chatbots that can help solve customer queries as they navigate through the business' website. This means that they can solve customer queries in real-time and guide them to relevant resources to drive conversions.

Take the example of Kik, Sephora's AI chatbot that makes product suggestions and helps consumers navigate the website and find what they are looking for.

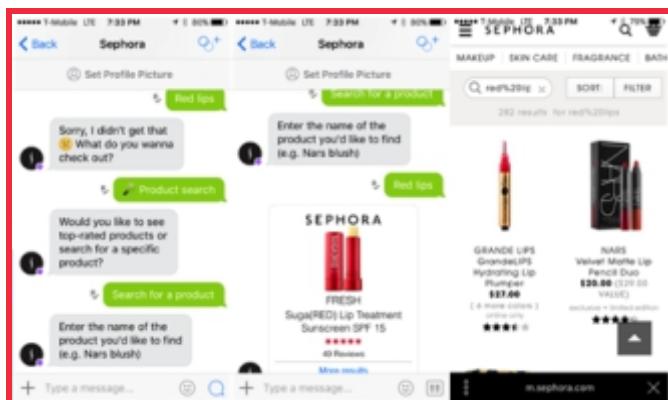


Image via Ecommerce Chatbots

From a customer's point of view, they don't need to wait on a call for 20 minutes to speak to a customer care executive and can get immediate assistance any time. So, chatbots definitely enhance customer experience and service.

## Conclusion

Intelligent automation is a powerful technology that has the potential to disrupt the current industry landscape and change the way things are done. With its numerous business benefits, it will soon evolve from its current nascent stage and will be extensively used for numerous industrial applications.

So, start early and use this technology to grow your business and beat your competitors.

If you have any questions regarding the benefits of intelligent automation for your business, feel free to ask them in the comments section. We would love to discuss this further with you.

## Student Article

# HOW I GOT INTO DATA SCIENCE AFTER A MASTER'S DEGREE IN ECONOMICS



**Ishan Savio Kerketta**

PG Diploma in Data Science, June 2018

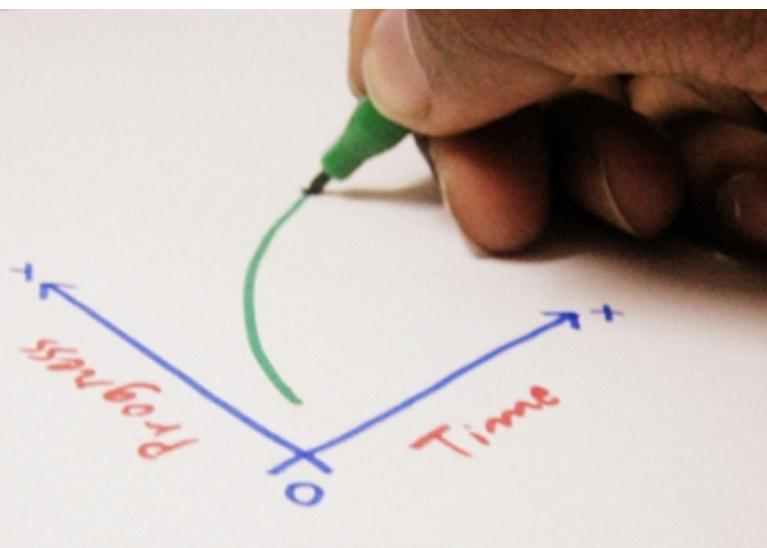


I was always good at computers and spent a lot of time on it since I was a child. Despite having this keen interest, I went into the Commerce stream in Senior Secondary School and later got a Bachelor's degree with Economics as one of the majors and a Master's degree in Economics. I was happy that I studied Economics but the child in me had some dreams unfulfilled.

During my Master's degree program, I had a knack for mathematical and statistical methods. Econometrics was however, a little challenging. As a requirement of the program, I had to complete a compulsory internship after the second semester. The professors at St. Joseph's College (Bengaluru, India) were very helpful and approachable. One of my professors in the Economics department shared an internship opening at a development research institute named Indira Gandhi Institute of Development Research (IGIDR), Mumbai. I applied and was selected. It is during this internship that I got a hands-on experience with datasets. (I had learnt some basics using SPSS before but this was more intense.) These were large national datasets. I was assisting a professor at IGIDR on his empirical research related to the Industry sector, with intensive use of Excel and Stata. Later in my Master's degree program I was also required to complete a Dissertation, the area of which I chose as Behavioral Economics. During this Dissertation, I learnt a lot about research methods like review of literature, data collection, Econometric methods to analyze data and interpretation of that analysis in the context of Economics.

```
115 ## fix Enterprise 2.na
116 master_frame2$primary_sector <- str_replace(master_frame2$primary_sector,
117                                               "Enterprise 2.na", "Enterprise 2.0")
118 #Convert primary_sector to lower case for merging
119 master_frame2$primary_sector <- tolower(master_frame2$primary_sector)
120 # 2. Use the mapping file "mapping.csv" to map each primary sector to one of the eight main sectors
121 mapping <- read.csv("mapping.csv", stringsAsFactors = FALSE, na.strings=c("", "NA"))
122 mapping <- gather(mapping, main_sector, my_val, Automotive...Sports:Social..Finance..Analytics..Advertising..Retail)
123 mapping <- mapping[,-3]
124 colnames(mapping) <- c("primary_sector", "main_sector")
125 mapping <- subset(mapping, !mapping$main_sector=="Automotive...Sports:Social..Finance..Analytics..Advertising..Retail")
```

Overtime, I realized that I really liked working with datasets and that a knack for problem-solving. I wanted a career in which I could work with data and maybe also where my knowledge of Economics could be useful. Around this time, the demand for data scientists and data analysts in India were on the rise. There were articles written about it often and advertisements of several courses offered by different institutes and educational websites flooded the internet.



So I did a little research and found that getting into data science required a good understanding of computer programming logic and a certain level of ease dealing with Statistics. Both the child in me and the adult me were happy to finally find something that could connect both. I joined a Post Graduate Diploma program offered by upGrad in association with the International Institute of Information Technology, Bangalore. The program was offered online, it was well-structured, included live sessions, regular assignments (both individual and group), had an exclusive discussion forum, had assigned student mentors and Career support. It was a complete package for getting into a Data Science career.

The course focused mostly on R as the language used for explanations and assignments but they did have additional optional modules on Python too. As I progressed in the course, my affinity towards programming logic and knowledge of Statistics and Econometrics helped a lot. In fact, many concepts like Inferential Statistics, Hypothesis testing, Linear Regression, Time Series and Data Sourcing were quite familiar. Even though I had a good understanding of programming logic, I didn't really code much before apart from some basic programming languages, C/C++ in high school and in a paper on HTML in college. But even this meager knowledge helped me to learn and work on R and code naturally. Overall, the difficulty level of the Data Science program was moderate for me – familiarity of Statistical Concepts and unfamiliarity of programming experience.

## 2

### Guesstimates

**How many weddings are performed each day in Japan?**



# ARTICLE BARN

## 1. The world has 7.5 billion people. Which in one chart Which countries do people live in, globally?

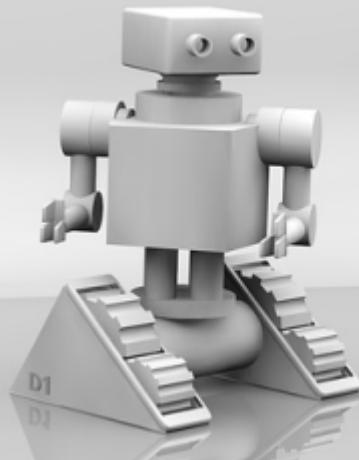
It's a very simple question, but it's also hard to get an accurate sense of the answer by browsing through a lengthy table of country-level population data. That's because there are nearly 200 countries spread around the globe, with populations ranging from near 1.4 billion (China or India) to countries a mere 0.001% of that size. How is it possible to do the mental math in interpreting such a wide range of data points simultaneously?

[Read More](#)

## 2. From cloud to the edge: On-device artificial intelligence boosts performance

If artificial intelligence has its way, we'll barely have time. As a result, AI may be the quietest major computing revolution the world has ever known. What's happening at one of the world's leading children's hospital is a great example.

[Read More](#)



## 3. Algorithm tells robots where nearby humans are headed

In 2018, researchers at MIT and the auto manufacturer BMW were testing ways in which humans and robots might work in close proximity to assemble car parts. In a replica of a factory floor setting, the team rigged up a robot on rails, designed to deliver parts between workstations. Meanwhile, human workers crossed its path every so often to work at nearby stations.

[Read More](#)



#### **4. Big Data predicts what you really like to watch and listen to - Three key ways**

What people actually do in their leisure time often doesn't match with what they say they'll do. Today, big data offers new visibility into how people experience entertainment. As a researcher who studies the impact of artificial intelligence and social media, there are three forces that stand out as especially powerful in predicting human behavior.

[Read More](#)

#### **5. The founding father of AI says humans should worry us more than machines**

Machine intelligence has vastly improved over the past decade. That is, in large part, due to deep learning. A technique that gives computers the ability to teach themselves. It underpins everything from world-beating chess and go algorithms to digital voice assistants like Amazon's Alexa and Apple's Siri.

[Read More](#)

#### **6. AI breakthroughs we'll most likely see in the next 5 years**

Convergence is accelerating disruption... everywhere! Exponential technologies are colliding into each other, reinventing products, services, and industries.

As AI algorithms such as Siri and Alexa can process your voice and output helpful responses, other AIs like Face++ can recognize faces. And yet others create art from scribbles, or even diagnose medical conditions.

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# IN A NUTSHELL



## 1. Alibaba's smart voice assistant to feature in cars as it expands in AI

As the tech giant expands in artificial intelligence; China's Alibaba launched the voice-controlled assistant device Tmall Genie in 2017 and released an auto version in April last year which will now feature in local vehicles from Audi AG, Renault SA and Honda Motor Co Ltd followed by vehicles include BMW and Volvo Cars in the near future.

The Tmall Genie which is akin to Amazon.com Inc's Echo will enable drivers to use voice commands to, for instance, place orders on Alibaba's online retail platform and buy movie tickets, & In the near future, the speaker will also allow drivers to monitor and control smart devices at houses equipped with a Tmall Genie-compatible device,

General manager Miffy Chen at Alibaba AI Labs said, "Together, we can greatly enhance our in-car services and make driving experiences more intelligent and interconnected."

## 2. Niti Aayog proposes Rs 7,500 crore plan for AI push

The note proposes that the new government pump in Rs 7,500 crore initially over a three-year period and set up a high-level taskforce to oversee roll-out and implementation of AI.

The NITI (National Institution of Transforming India) Aayog, a policy think tank of the Government of India, established with the aim to achieve Sustainable Development Goals, has drawn up a plan for creating an institutional framework for artificial intelligence (AI) in the country.

A cabinet note for this regard has been circulated to provide a funding of Rs 7,500 crore for creating cloud computing platform called "AIRAWAT" & research Institutes.

It also proposes that the new government pump in this funding initially over a 3 year period and set up a high level taskforce to oversee roll-out and implementation of AI.

### **3. Salesforce is buying data visualization company Tableau for \$15.7B in all-stock deal**

**Salesforce today announced a huge piece of news in a bid to step up its own work in data visualization and (more generally) tools to help enterprises make sense of the sea of data that they use.**

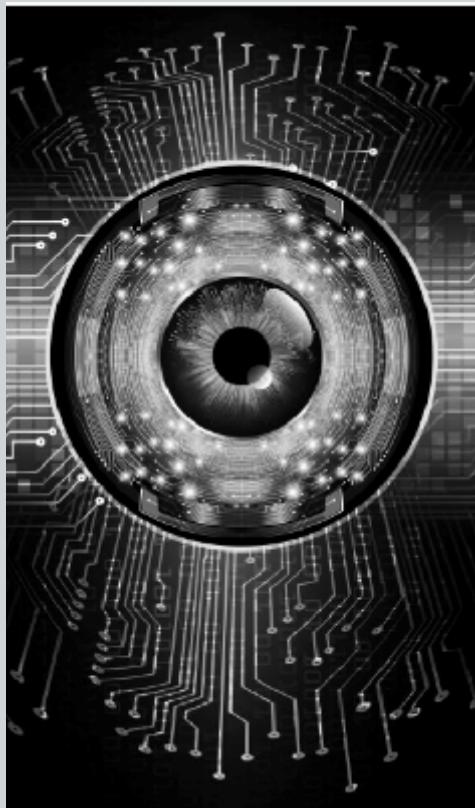
This deal will involve shares of Tableau Class A and Class B common stock getting exchanged for 1.103 shares of Salesforce common stock

The enterprise value of the transaction, based on the average price of Salesforce's shares as of June 7, 2019 is \$15.7 billion; a huge jump on Tableau's last market cap: valued at \$10.79 billion. The two boards have already approved the deal,

This is a huge deal for Salesforce that continues to diversify beyond CRM software, into deeper layers of analytics and has already been approved by the two boards

Keith Block co-CEO Salesforce said, "Salesforce's incredible success has always been based on anticipating the needs of our customers and providing them the solutions they need to grow their businesses. Data is the foundation of every digital transformation, and the addition of Tableau will accelerate our ability to deliver customer success by enabling a truly unified and powerful view across all of customer's data."

Tableau has about 86,000 business customers, including Charles Schwab, Verizon (which owns TC), Schneider Electric, Southwest and Netflix. Salesforce said Tableau will operate independently and under its own brand post-acquisition.



### **4. DeepMind's first commercial product diagnoses eye diseases**

The renowned Cambridge-based artificial intelligence experts DeepMind is preparing to launch its first commercial product that aims to aid the diagnosis of complex eye diseases. In a live demonstration, a patient had a retinal scan performed on her eye & the system was able to provide a diagnosis and 'urgency score' in just 30 seconds. This will free up doctors' precious time for other purposes and ensure patients get treatment ASAP. A range of eye diseases that can be diagnosed by system including glaucoma, macular degeneration, and diabetic retinopathy. Much like robotics and 5G are expected to help patients in rural areas gain access to world-leading experts, AI systems like DeepMind's will provide the fastest and most accurate diagnosis of medical problems no matter where a patient is. Developed in conjunction with London's Moorfields Eye Hospital, the system has the same level of accuracy as the world's leading specialists.

# TOP DATA SCIENTISTS TO FOLLOW



**Vin Vashishta**



He brings data science and machine learning products to market. He has spent the last 22 years taking products off the whiteboard and into production. His career is one-part strategy and two-parts technical expertise. He speaks ground truths to senior leaders so they can drive revenue with emerging technologies.

Since 2015, He has been part of the team building Pocket Recruiter; an application that uses machine learning to automate the drudgery of screening resumes. He has been a thought leader for IBM, Intel, SAP, and others. He is also a contributor for Fast Company and Silicon Republic.

V-Squared is his personal consulting practice. He is available to help drive AI product strategies from the perspective of someone who has done it before. He has helped build products with revenue streams in the \$100's of millions..

Specialties: Business Strategy, Product Management, Data Science, Machine Learning, Deep Learning.



**Andriy Burkov**



**His best-selling book:** The Hundred-Page Machine Learning Book

**View Here:** <http://themlbook.com>.

**About him:** Ph.D. in artificial intelligence, passionate about data, speaking English, French, and Russian. Excellent scientific programming and team leadership skills. Almost 20 years of overall experience working on various computing projects, including several own startups.

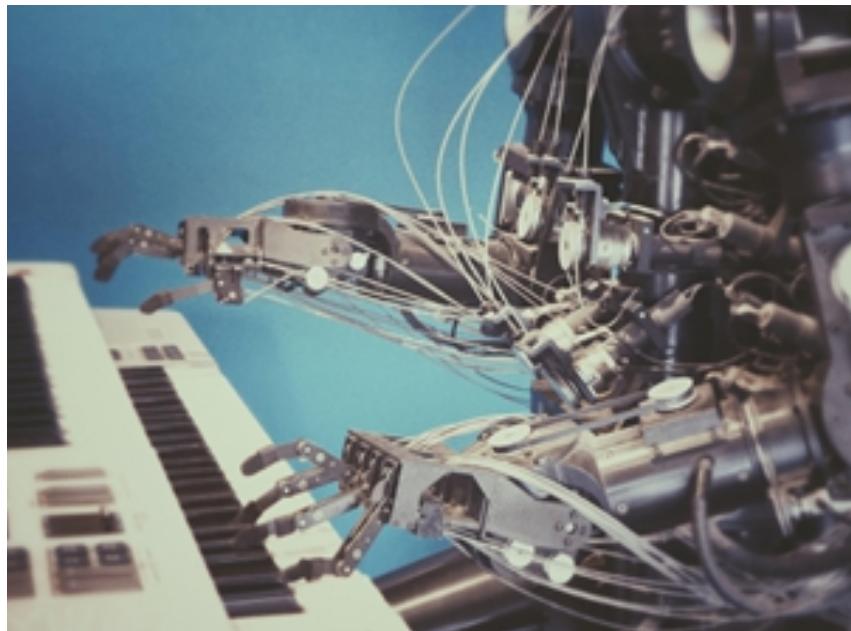
More than seven years of practical hands-on experience in automated data analysis, machine learning, natural language processing, Linux hacking, effective database, and search engine setup and querying.

Expert in both Python and Java with several years of day-to-day design and development in the big data context.

Specialties: machine learning, natural language processing, conversational interfaces (chatbots), information retrieval.

# dataShorts

## TOP 5 MACHINE LEARNING & AI STARTUPS



- Webtunix
- Thoughtspot
- Cygnet infotech
- GoodWorkLabs
- avaamo

[Check this out](#)

## AI POWERED RETAIL STORES

### Pioneers of AI powered retail stores.

• **Walmart Lab** - It is equipped with AI powered sensors for inventory tracking and product freshness.

• **Amazon Go** - The futuristic store doesn't have cashiers or self-checkout machines.

• **Macy's** - Macy's has a mobile Web-based artificial intelligence platform that enables shoppers to ask product questions and receive responses



## TOP 5 HASHTAGS TO FOLLOW



Trending hashtags on Social Media

- #datascience
- #machinelearning
- #artificialintelligence
- #ai
- #bigdata

## MACHINE LEARNING USED IN CUSTOMER EXPERIENCE

### 3 Companies using ML & AI in Customer Experience

**BMW** - The more you drive an AI-enhanced BMW, the more it learns about you.

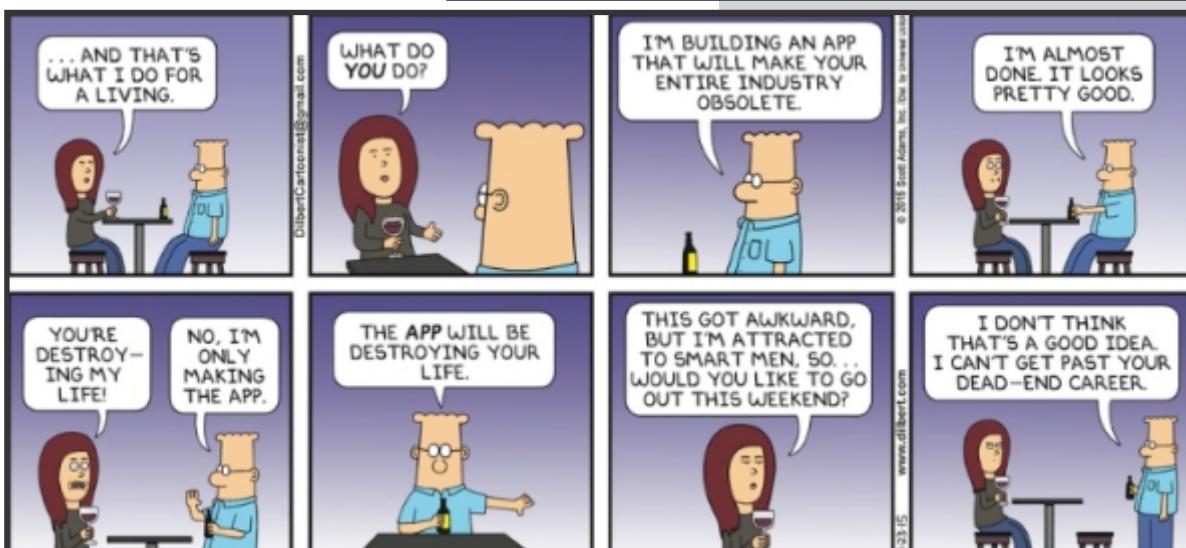
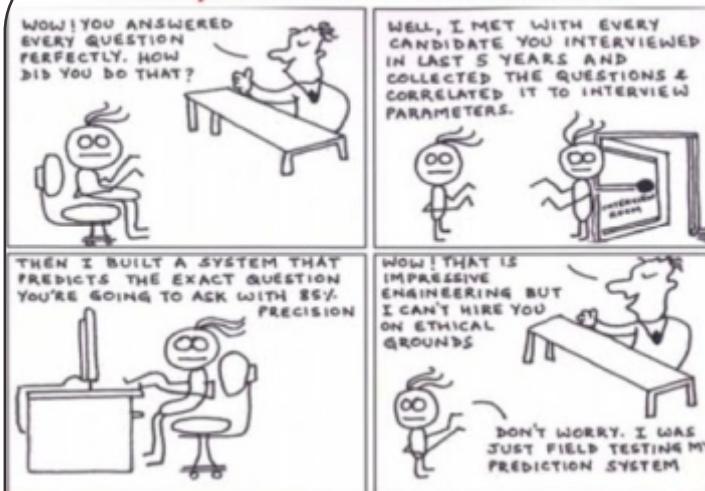
**Starbucks** - The app remembers each customer's favorite drinks and is tailored to their preferences so that everyone has a unique and convenient experience.

**Burberry** - The luxury accessories brand uses image recognition to scan just a small section of a purse and determine its authenticity based on the pattern, texture and weaving.



# DATA TICKLERS

**When you interview a data scientist...**



# KAGGLE PROBLEM STATEMENTS



## 1. Since the cricket world cup is on, here are some data sets on IPL

Indian Premier League (IPL) is a Twenty20 cricket format league in India. It is usually played in April and May every year. As of 2019, the title sponsor of the game is Vivo. The league was founded by Board of Control for Cricket India (BCCI) in 2008.

[Read More](#)

## 2. The World Happiness Report is a landmark survey of the state of global happiness that ranks 156 countries by how happy their citizens perceive themselves to be.

This year's World Happiness Report focuses on happiness and the community: how happiness has evolved over the past dozen years, with a focus on the technologies, social norms, conflicts and government policies that have driven those changes.

[Read More](#)

## 3. The dataset contains ~5 years of high temporal resolution (hourly measurements) data of various weather attributes, such as temperature, humidity, air pressure, etc.

This data is available for 30 US and Canadian Cities, as well as 6 Israeli cities. I've organized the data according to a common time axis for easy use. Each attribute has its own file and is organized such that the rows are the time axis (it's the same time axis for all files), and the columns are the different cities (it's the same city ordering for all files as well).

Additionally, for each city we also have the country, latitude and longitude information in a separate file.

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# GUESSTIMATES SOLUTIONS

1. How can you predict total withdrawals from an ATM for a particular day?

**ATM is fully functional and is open 24 hours.**

**Now, let's calculate the number of footfalls per day at the particular ATM (assuming the ATM to be a non-rushy area , people only coming up for doing withdrawals - not for savings checking, number change/pin change and also - there's no urgent declaration by the government on demonetisation)**

**12 AM - 6 AM : 1 customer per hour ; so approximately 6 customers**

**6AM - 10 AM: 10 customers per hour -> 40 customers**

**10 AM - 5 PM: 5-6 customers per hour -> 42 customers**

**5PM - 9 PM: 10 customers per hour -> 40 customers**

**9PM- 12 AM: 5-6 customers per hour ->18 customers**

**Total footfalls = 146 customers... so, the number of withdrawal is approx 146 as per above assumptions.**

# 2.

**How many weddings are performed each day in Japan?**

Try a ground-up approach. In a city of 1 million (Kyoto), how many people are of marriageable age? Let's say 750,000. How many get married in a given year? Maybe 2 percent? That's 15,000. Now, the population of Japan is about 200 million, so multiply 15,000 by 200 - and you get 300,000 weddings every year. Divide that by 365 and you get 822 weddings per day (on the average, though clearly some days are more popular than others). To estimate this in your head, you could divide 300,000 by 3,000 (getting 1,000), then take off another fifth. Around 800 would be close.

To summarize:

1 million people in Kyoto

750,000 of marriageable age

2 percent get married in the average year

$750,000 \times 0.02 = 15,000$  marriages every year in Kyoto

200 million people in Japan

$200 \times 15,000 = 300,000$  weddings per year

$300,000 / 365 = 822$  weddings per day (or approximately 800)



# Events & Hackathons

## The Fifth Elephant 2019

The Fifth Elephant is rated as India's best data conference. It is a conference for practitioners, by practitioners. In 2019, The Fifth Elephant will complete its eighth edition. The Fifth Elephant is an evolving community of stakeholders invested in data in India. Our goal is to strengthen and grow this community by presenting talks, panels and Off The Record (OTR) sessions that present real insights about:

**When:** 25<sup>th</sup>-26<sup>th</sup> July 2019

**Where:** Bangalore

[Register Here](#)

## Data Science New Regular Batch By Experts From IIT & IIM, Analytics Path

The exponential growth in the usage of data has lead to the rise in the demand for a distinct analytics technology namely Data Science. By skillfully processing the data it could be efficiently used to deliver a great value to the business development. Almost every business uses some kind of data analytic tools to optimize deliveries on its driver's routes. Data is considered as the sword in this 21st century where Expertise extracts the required data from the massive amount.

Build knowledge in relation to all the advanced job oriented concepts of Data Science by enrolling in our Analytics Path New Regular Batch Commencing From 10th July, 7 AM, Hyderabad.

Time To Register For Data Science Training New Regular Batch By Experts From IIT & IIM, Analytics Path From 10th July, 7 AM, Hyderabad.

**When:** 10<sup>th</sup> July 2019

**Where:** Hyderabad

[Register Here](#)

## Hackathon (online)

Calling all coders and data scientists to join McKinsey's hackathon.

During our online Hackathon, you will get a glimpse at the sort of problems and challenges that our McKinsey data scientists solve on a daily basis. The best participants may also be invited for interviews with McKinsey Analytics.

**When:** 20<sup>th</sup>-22<sup>nd</sup> July 2019

**Last Online Hackathon Date:** 20<sup>th</sup>-22<sup>nd</sup> July 2019

[Register Here](#)



# CAREER TRANSITIONS



AI Software Engineer



Senior ML Engineer



**Vibhav Patil**



**Himanshu Gupta**



Associate Consultant



Data Analyst.



**Satrughna Kumar  
Darlapudi**

Project Lead



Principle Infra developer

**Cognizant**



Big Data Engineer



Technical Specialist



**BOSCH**

**Kishore Dhandapani**



Service Delivery  
Consultant



→ **J.P.Morgan**

**Abhinav Dubey**



**Gokul Talele**

Associate Manager



Analytics Senior Unit Manager -  
Risk Analytics



Tech Lead (ML AI)      Principal Consultant



**Entercom**

**Shashank Sane**

## Refer & Earn



### PROGRAM NAME

### REFERRAL AMOUNT

#### DATA SCIENCES

PG Diploma in Data Science in association with IIIT-B	₹10,000
PG Diploma in Data Science (Hybrid - Online + Offline) in association with IIIT-B	₹15,000
PG Diploma in Machine Learning and AI in association with IIIT-B	₹10,000
PG Program in Big Data Engineering in association with BITS Pilani	₹10,000
PG Certification in Big Data & Analytics in association with BITS Pilani	₹5,000
Business Analytics Certification Program	₹1,500
Master of Science in Data Science in association with IIIT-B and Liverpool John Moores University	₹15,000
Master of Science in Machine Learning and AI in association with IIIT-B and Liverpool John Moores University	₹15,000

#### MARKETING & MANAGEMENT

PG Certification in Digital Marketing & Communication in association with MICA	₹5,000
Executive Program in Strategic Digital Marketing in association with Cambridge Judge Business School Executive Education	₹7,500 / \$120
PG Program in Management in association with IMT Ghaziabad	₹7,500
PG Program in Life Insurance in association with HDFC Life	₹5,000
Product Management Certification Program	₹10,000

#### TECHNOLOGY

PG Diploma in Software Development in association with IIIT-B	₹10,000
PG Diploma in Software Development (Blockchain Specialisation) in association with IIIT-B	₹10,000
Entrepreneurship Certificate Program	₹5,000

#### CERTIFICATION PROGRAMS WITH IIIT-B

PG Certification in Machine Learning & NLP	₹5,000
PG Certification in Machine Learning & DL	₹5,000
PG Certification in Data Science	₹3,000
PG Certification in Software Development	₹3,000
PG Certification in Blockchain Technology	₹5,000

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