

Jigsaw Academy's

Salary Report 2014

— for the India Analytics Industry —



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Introduction

Jigsaw Academy takes great pride in presenting their 2014 Salary Report for the analytics industry in India. The first quarter of 2014 saw demand for analytics professionals continuing its upward trajectory, and increasing awareness of data science. More companies are investing more heavily in data initiatives, and students and professionals are taking concrete steps to learn more about the field and become data savvy.

This report is an effort by Jigsaw to give all those already in analytics, as well as those interested in the industry, a comprehensive view of the analytics scenario in India. Other than an update on salary trends and projections, we have also included articles on the state of the industry in 2013 and our projections for 2014. We also have a section on Big Data, which includes an overview of the key skills a Data Scientist needs, as well as an interview with a Big Data guru.



Everyone is more aware of data science. Companies are investing more heavily in data initiatives.

A note

from the CEO of Jigsaw Academy



It's 2014, and the Data Analytics and Big Data buzz has far from died down. However the one thing that's an even bigger issue than 'Data' is the huge number of career opportunities that it offers. The demand for trained analytics and big data professionals is increasing at a tremendous rate. Supply is still very constrained and this means that over half the positions on offer still remain unfilled. Today's professionals need to pick up analytics skills and those that do will reap significant benefits in the coming years. And those who don't will find themselves getting marginalized very soon.

We launched this annual analytics salary report last year to highlight the analytics scenario in India. The industry needs skilled talent and we felt that if professionals and students embarking on their careers are aware of the salary trends and skills in demand in the industry, they would consider building their analytics skill set.

Last year's report generated terrific response from the industry. Students, professionals and organizations, as well as academic institutions found the report very useful. It helped them better understand what is happening in the analytics industry and take more informed decisions.

We are grateful for the support we have received from analytics professionals for this year's report. A special thanks to Bhasker Gupta from Analytics India Magazine for his support and help in compiling this report. We hope this report will inform and inspire many to take that first step and enter the world of data.

— Gaurav Vohra

Scenario

The Analytics Scenario in India in 2013

In 2013 we saw a significant rise in Data Analytics and Big Data initiatives across all sectors in India. Finance, telecom, ecommerce and retail sectors showed higher investments in data related tools and technologies. Industries like healthcare, auto and manufacturing also increased their data related spend. Hiring picked up considerably but the demand supply lag was still considerable considering the sheer lack of availability of trained analytics professionals.

Some important figures are as follows:



Size of the Indian
analytics Market



Bangalore is still the hub of analytics in India, though other cities are coming up. Last year, Bangalore housed 29% of all analytics firms in India (AIM)



Expected Indian
Analytics market by 2015.
(Business Standard
report)



No. of companies operating
in this segment in India

Other key facts for 2013:

- Though SAS remained a popular tool, trends show that R has been increasing its share of the market. Several analytics companies use both SAS and R, depending on project and client preferences.
- Big Data tools Hadoop and Map Reduce were industry favourites. Companies are investing in building this capability, but are not using it effectively yet.
- Hadoop skills were in demand coupled with SAS and R.
- Web analytics, text analytics and social media analytics began to gain popularity.

Predictions

for the Analytics Industry in 2014

- **The hype around big data will hit a slump**

The hype around Big Data is far higher than the actual adoption of Big Data technologies and tools in India today. We predict that this hype bubble will burst soon, perhaps as soon as by end 2014.

- **Online businesses will focus more on analytics**

There has been explosive growth in India in the e-commerce segment. In 2014, as competition increases, online businesses will start focussing on using analytics as a way for competitive differentiation. Those that are able to set up a culture of data driven decision making will race ahead of the pack.

- **Social media analytics will become more popular**

More and more businesses are leveraging social media to connect with their customers. In 2014, organizations will begin to derive significant insights from their customers through social media analytics. Techniques like text analytics and sentiment analysis will gain credence. FMCG companies and media houses (especially TV channels) are putting a lot of effort on social media and they will lead the application of analytics in this domain.



Big Data will lose its sheen but analytics will continue to be the mainstay of an organization.

Gaurav Vohra, CEO and Co founder, Jigsaw Academy

Predictions

for the Analytics Industry in 2014

- **There will be a greater demand for analytics training**

Demand for analytics is currently driven by businesses and organizations that want to up-skill their employees. We predict that in 2014, MBA colleges will place more emphasis on analytics as part of their regular curriculum to cater to the demand-supply gap for analytics professionals. A number of specialized analytics courses (such as the ones offered by the Great Lakes Institute of Management, Chennai and the Indian School of Business, Hyderabad) have already gained popularity in 2013. We predict that many more such courses will be launched in 2014.

- **Web analytics**

Though more companies have already begun to focus on their online presence, they will begin to start analyzing the impact of their online presence in more effective ways. We will see an increase in demand for web analysts, whose salaries we predict will be 20% higher than IT professionals with similar years of experience.

- **Text analytics**

This area of analytics will begin to be used extensively, for sentiment analysis. We saw this in the run up to the general elections in India, when many political parties used it to see voter trends. We expect to see an increase in sentiment analysis by corporates post elections, which will give it more momentum.

- **Cloud analytics**

We will see Cloud based analytics tools becoming mainstream, particularly in the web and social media segments. We expect this trend to move to other domains in time.

- **Analytics salaries will continue on their upward trajectory**

Salaries for analytics professionals have been rising faster than average for the last 10 years, fueled by increasing demand for skilled people. This trend will continue in 2014. We predict that entry level salaries will grow by 5 to 10%, and salaries for those with 5+ years of experience will grow by 10 to 15%.

Salary Report

This section presents data we have compiled based on detailed information and comparisons on salaries for analytics professionals based on five parameters. These are:

- Role
- Type of Company
- Analytic Tool experience
- Years of Experience
- City

Our data shows that salaries in analytics can vary considerably depending on role, as well as years of experience. In addition, the type of company worked for, the city lived in and the analytic tools worked on, can impact remuneration considerably.

Compensation at captive centers which deal with locked-in clients for longer time periods typically offer higher salaries for analysts. Niche service providers who move analysts across multiple industries and clients offer lower salaries, but give the analyst a richer resume opportunity.

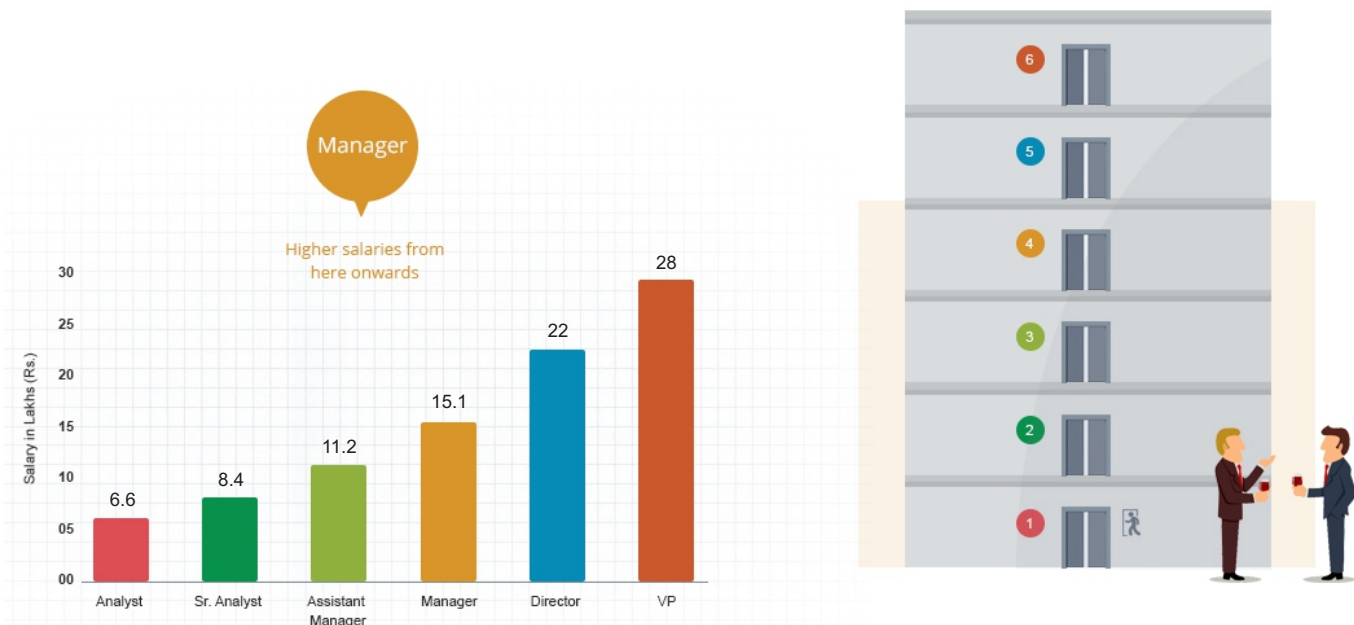
Similarly, there are some cities which are analytic hubs that attract the best analytics talent with the lure of higher salaries. Cost of living also plays a role and we see that cities with a higher cost of living have higher salaries for analytics professionals. We have tried to capture salary trends in these cities as compared to others, while also comparing salaries depending on the kind of analytics tools worked on. As expected, the more analytic tools a person builds expertise in, the higher marketability and future compensation.

Salary Report

Role and Years of Experience

Salary More than Doubles from Entry Level Analyst to Manager

The first comparison is across various analytics roles and experience levels. This parameter was chosen to essentially show how salaries grow as you evolve in your analytics roles and as you gain added years of experience. As with any career, you would expect to get an increase in remuneration every time you got a promotion or with every added year of experience. However things are a lot perkier as a data analyst and trends show that salary increments are higher than the average 10%.



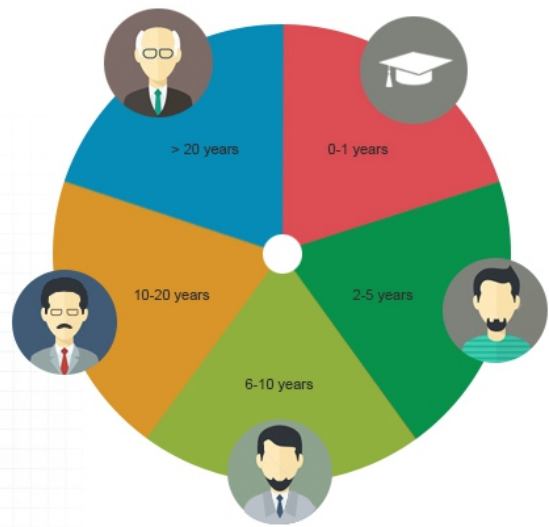
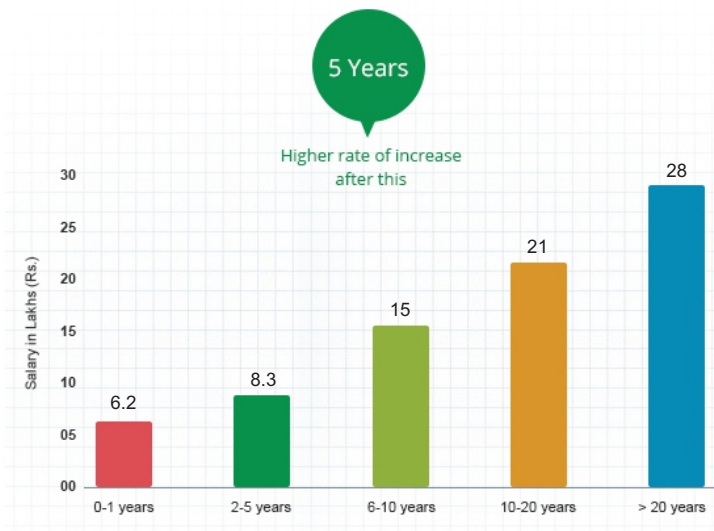
Key Takeaways

- Average entry level salaries have increased 27% since 2013, from Rs. 520 thousand to Rs 660 thousand per annum.
- Typically, there is a 250% increase in salary from entry level analyst to manager.
- Managers in analytics command an annual salary upward of Rs 1500 thousand.
- At senior levels, annual salaries are upward of Rs. 2500 thousand which is more than a 60% increase from a managers salary.

Salary Report

Years of Experience

In Five Years, Data Analysts Earn Thrice what they Start off with.



Key Takeaways

- Typical increase in salary is 12-15% every year
- Big jump in compensation after the 5 year mark.

Salary Report

Types of Companies

Ecommerce Companies are the New Entrants who are Paying Well to Attract the Right Talent

Organizations hiring analytics talent fall into six broad groups.

IT Companies

This includes IT companies such as Wipro, TCS and Infosys that are now looking at analytics as the next growth engine.

Knowledge process outsourcers or KPOs

This includes companies such as Genpact, Accenture and WNS that offer analytics as one of the outsourced services in their portfolio.

Analytics Consulting Firms

This includes specialized analytics companies such as Mu Sigma, Fractal Analytics, and Gramener.

Retailers

This includes Tesco, Target, Big Bazaar and many more that use analytics to support their own businesses brands.

E-commerce

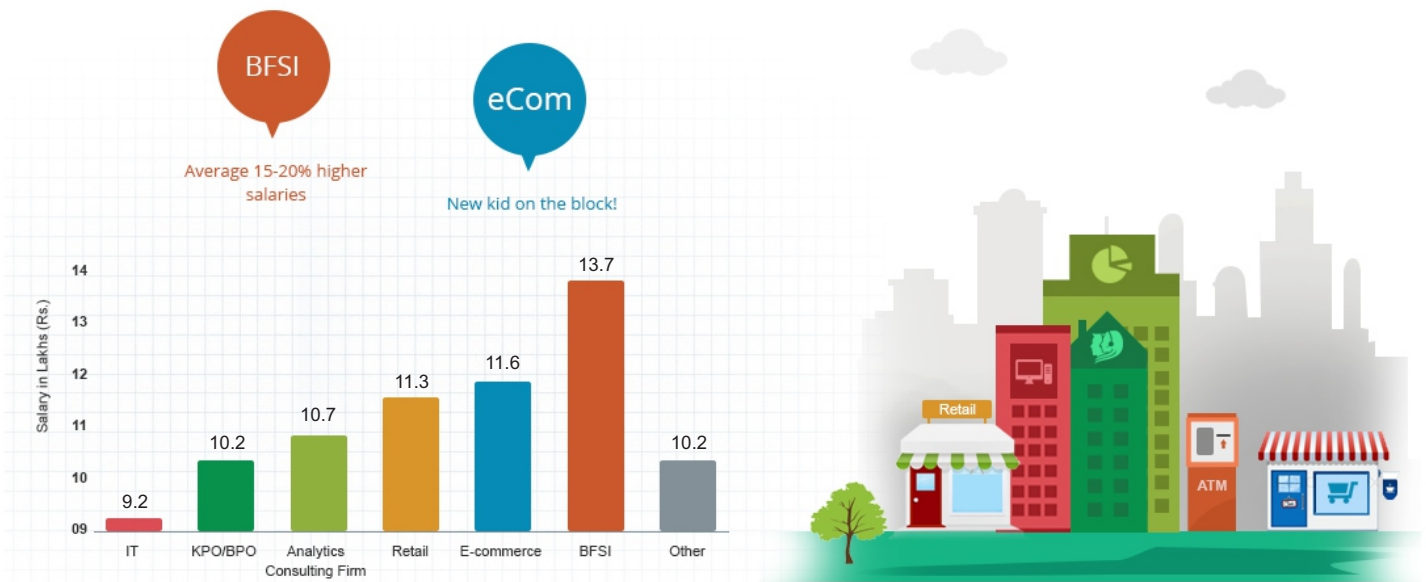
This includes companies like Flipkart and Amazon that use analytics to build retail businesses for brick-and-mortar companies.

BFSI or In-house units

This includes Banking, Financial services and Insurance companies that use analytics to support their own businesses such as HSBC, Citibank, American Express etc.

Salary Report

Types of Companies



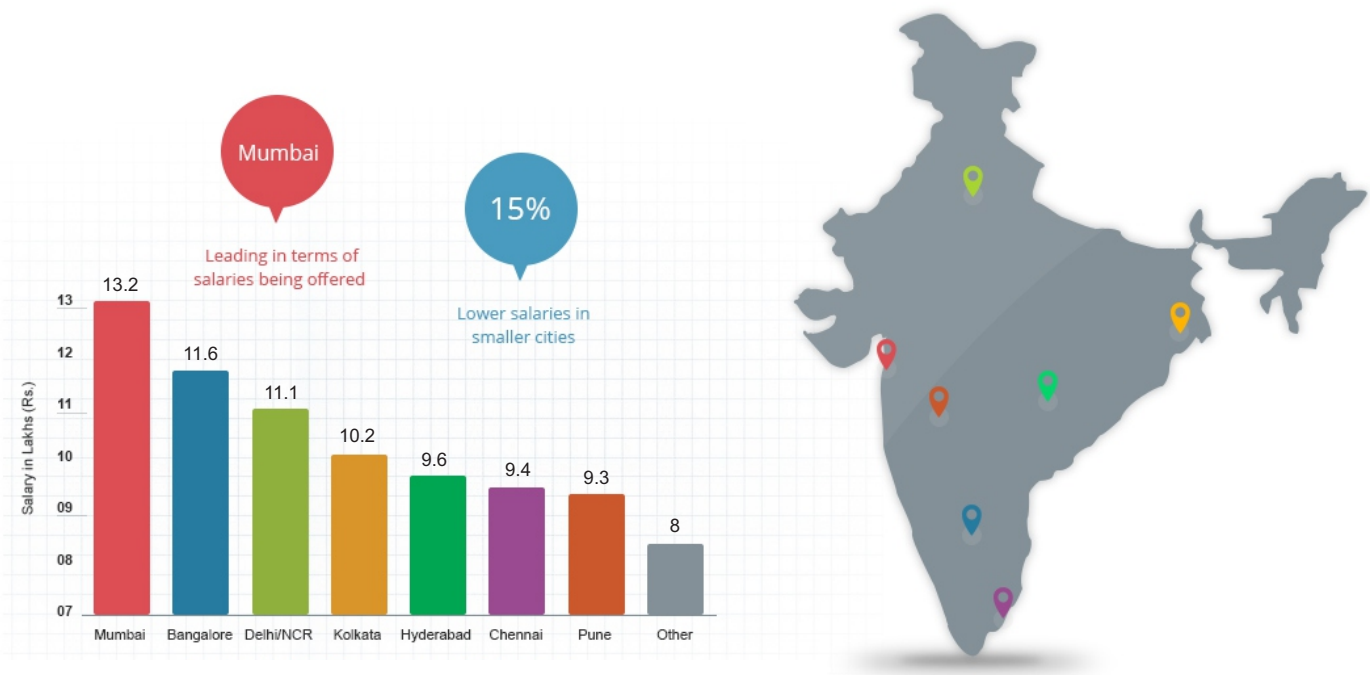
Key Takeaways

- Captive centers pay higher salaries in general. If you look at the top paying companies, they are all captives. The reasons they pay their analysts higher salaries is primarily to retain them. When you work for a captive center, you are tied in to one particular industry with limited scope to broaden your expertise in other domains. As there is little variety, the work could get monotonous, and hence the high salaries to keep motivation high.
- Among the captives (such as BFSI, e-commerce and retail), BFSI offers the highest salaries. This is because these companies are most easily able to measure the impact of their analytic initiatives. Since they know the value that analytics brings to their business, they confidently invest more in analytics and are happy to pay higher salaries to retain their analytics talent.
- E-commerce companies are the new entrants. They are building their analytics capabilities and in a bid to get the right analytics talent, are willing to offer good salaries.
- As compared to captives, analysts that work for service providers either in the KPO/BPO or IT sector have the opportunity to move around domains and gain expertise. This is considered a plus as it is great for your CV and this is the advantage that affords service providers the luxury of paying lower salaries but still attracting high quality talent.

Salary Report

Cities

Bangalore and Delhi/ NCR are the Hubs for Analytics Companies in India



Key Takeaways

- Mumbai has traditionally offered the highest salaries because of its high cost of living and the trend continues.
- Bangalore and Delhi/ NCR are the hubs for analytics jobs. They have the highest number of analytics companies and analytics jobs with salaries in the range of Rs 11 hundred thousand.
- Analytics salaries in Hyderabad and Pune are 20% lower. Companies can bring their salaries down by 15% if they move to a smaller city.
- The average analytics salary in India is 11.1 hundred thousand.

Salary Report

Analytic Tools

Hadoop is a Sought after Skill and Analysts who Have Expertise in SAS, R and Hadoop Command the Highest Salaries



Key Takeaways

- Earlier, companies were using any one tool, SAS being the most common. Consequently those with expertise in SAS commanded the highest salaries. Today R is gaining popularity and companies are increasingly using a combination of SAS and R tools. This means higher salaries for those with SAS and R skills.
- Hadoop is also gaining momentum and has become a sought after skill.
- There is almost a 10- 20% premium in salary for those who know SAS, R and Hadoop.

A note on Big Data

Get Familiar With Big Data Now, or Face 'Permanent Pink Slip.

— Wall Street Journal, April 2014

Though many say Big Data is just hype, the reality is that companies are investing big time in Big Data initiatives and are willing to pay big bucks for the right talent. As an article in the Wall Street Journal states, in fifteen years, those with no quant or data skills risk being laid off.

In India, Big Data is just about picking up. Companies especially in the finance, retail and e-commerce sectors are relying more heavily on big data to make decisions that impact their sales, operations and workforce. There is such a dearth of Big Data talent that these companies are willing to pay high salaries for the right skill set.

The key characteristics of the Big Data Industry in India are:

- Bangalore, Hyderabad and Pune are the hubs for Big Data in India and have the most number of open Big Data jobs.
- Average salaries for Big Data professionals with Hadoop skills is Rs 13 hundred thousand per annum.
- Most Big Data professionals are skilled in Hadoop and R, followed closely by Hadoop and SAS.
- A combination of Hadoop and Tab skills is also increasingly in demand.
- Companies don't have the capability to train people with these skills and so expect newrecruits to come trained.

Big Data Skills

If you are wondering about taking a leap into the Big Data world, then you might also be wondering about which skills in particular you need in order to get your foot in the door. A Big Data Scientist would need a combination of:

- Technical programming skills
- Analytics skills, and hands on experience with Analytical tools
- Expertise on modeling techniques and econometrics
- Excellent presentation and communication skills
- Business Skills

Technical Skills

The most common languages used in Big Data Applications and hence the languages you need to build expertise in, are Java, Python, C#, and R. These implement MapReduce queries on big databases such as Hadoop, HBase, Cassandra, and MongoDB. However it is worthy to note that today there seems to be a more significant growth in Hadoop, R and MongoDB and so it may be a good idea to begin by learning these first.

The other emerging technologies are Windows Azure, IBM PureData, Oracle Big Data Appliance and HPCC, Pivotal, Sap HANA, Google BigQuery, SAS, Tableau, MariaDB, Pentaho, Jaspersoft, and Talend, so keep them on your radar as well., Tableau, MariaDB, Pentaho, Jaspersoft, and Talend, so keep them on your radar as well.

Big Data Skills

Analytics and Business Skills

While technical skills are a very important component of Big Data Analytics, equally important are your analytic and business skills. To grow in your Big Data role you need to be able to define profitable business objectives and put the analysis in a perspective that will help enable your organizations to well leverage the analysis.

Analytics includes actually working with the outputs and coming up with high end recommendations and insights to aid business growth. You can be involved in descriptive, predictive or prescriptive analytics, which in essence talks about how to churn outputs using great technologies into actionable insights at various stages of analysis. Essentially, a combination of analytics and technology are the means to achieve the goal of business development and profitability.

Presentation Skills

Presentation skills are also very crucial skills for Big Data professionals. They need to creatively present results using sophisticated Data Visualizations which present high end business solutions in a crisp and concise manner. Termed as soft skills, an ideal candidate needs not only to be able to communicate and deliver information effectively but they also need to comprehend things well and listen to the client, so as to really understand the business problem to begin with.

Realistically speaking it is not often that organizations can find suitable candidates that possess all these skills. The truth of the matter is that the industry is still nascent, and trained professionals are hard to find. Several companies look for people with some of these skills and then invest in training them on the other skills needed. Today several institutes like Jigsaw Academy have courses and certifications in Big Data, where you can get trained in the big data skills in demand. [Take a look at the course details here.](#)

An interview

with Bhoopathi Rapolu, Big Data Strategist



Bhoopathi Rapolu is a Big Data Strategist and is currently Practice Head – Analytics at [Infotech Enterprises](#). With degrees from Osmania University and IIT, Kharagpur, Bhoopathi has a real passion for Big Data, as is demonstrated not only through his work, but also through his very interesting [blog](#) and numerous speaking engagements. Bhoopathi loves using technology to address business problems.

It has always been Jigsaw Academy's quest to share the experiences and knowledge of data analytics and Big Data experts with all those interested in the field. Team Jigsaw sat down with Bhoopathi to talk about the amazing world of Big Data and how he believes it is transforming and will continue to transform the world in remarkable ways. Below are snippets from the conversation.

“ People are continuously innovating and beginning to look at the real world applications and benefits of big data.

An interview

with Bhoopathi Rapolu, Big Data Strategist

Everyone is talking about Big Data, defining it as the new big thing, yet no one has a complete understanding of what this term really means. What is Big Data?

We are all very familiar with data processing, analytics, and data development. This is a three to four decade old industry. But there are certain data sets that cannot always be processed using traditional IT tools because of constraints such as file size, variety of data formats, time available to process it, and ease of data generation. Newer challenges are constantly cropping up. And in return, there are new tools to counter these, and hence the new name.

Primarily, the data was always there but these new attributes such as size, format, and speed have led to the ultimate technology theme that we like to call Big Data.

What are the top 3 advantages of Big Data, according to you?

It helps you understand the customer. I would say this is one of the biggest advantages of Big Data. Companies always want to understand customer likes and patterns and profile them to an individual level. Now they have voluminous data — customer preferences, income level, sex, etc — to help them target initiatives, products, and offerings to specific groups who have a need for them. The process has been found to have a relatively higher acceptance level when compared to a generic advertisement. This targeted marketing has come into play due to Big Data.

This is closely followed by Big Data's ability to optimize business processes. Most of a company's processes are recorded and automated and Big Data helps us collect attributes such as when a particular activity was started, how long it has taken, its approvers, and where it is stuck. This information makes it easier to look at the operational gaps and identify pockets of improvement. And finally, monitoring and controlling the health of humans and machines, the latter being my area of focus. Subsequently, this data also helps us predict conditions that could become a hurdle in the future and tackle them at a preliminary stage.

Big Data is an elegant solution that enhances our understanding of the world and we are only just beginning to appreciate it. It is the telescope of the 21st century.

An interview

with Bhoopathi Rapolu, Big Data Strategist

So what is the future of Big Data?

We are already witnessing the benefits of Big Data solutions whether it's through social media, large scale e-commerce sites such as Amazon, or detecting financial initiations like frauds. This is the beginning. Recently a survey by Microsoft's estimated that about two thirds of the companies surveyed are sitting on about 100 terabytes of data today. Cumulatively, we are talking about hundreds of exabytes of data — it is going to scale even higher and so will the benefits. Five years from now what we perceive as Big Data will be completely different. We still don't know what Big Data can do because that is being redefined every day.

This subject has a vast spectrum of uses in almost every setup. But today a lot of technological evolution and innovation stems from smaller companies. Newer companies are entering the market and shining. And Bangalore is one of those centers of innovation with so many start ups setting up shop here. Big Data is here to stay, irrespective of the size or value of the company.

So when companies hire big data analysts, what is it they look for?

When companies including mine hire junior level solution developers, we look for a general understanding of analytics with knowledge in java programming. This makes it easier to train them in hadoop-based programming. For senior level technical roles, we look for a strong technical background and professional knowledge of programming languages. It is only for business analyst roles that I look for people with a Big Data mindset.

How do you evaluate this mindset in an interview?

I give them sample problems to see if they can think on their feet and come up with real world solutions. It's all about the application of Big Data technologies and I have a great passion towards helping people transition into this role with ease because there are massive opportunities in the market today for people who are clever enough to take these up. It's a win-win situation for everyone involved in this process. But people have inhibitions about the transition because after spending years on the technical side, they question their ability to succeed in such a role due to their lack of

An interview

with Bhoopathi Rapolu, Big Data Strategist

experience. In reality, no one has ten years of experience in big data. You just need to know how to approach it and this is what we look for in an interview.

Any predictions on the growth of Big Data talent and salaries this year?

There has been a rise in recruitment in comparison to the previous year. When compared to traditional IT skills, possessing Big Data skills automatically puts you in a higher salary bracket. But in terms of sectorial growth, financial and retail services have only just started getting established benefits by using Big Data more and more. The operational side of telecom and transportation will also start adapting it a lot more as will every other industry such as oil and gas and mining.

Before we leave, one Big Data technology you look forward to.

Database technologies are an area where a lot of radical innovation is taking place. A couple of niche companies from the silicon valley are coming up with technology which is just as good if not better than what the biggies in the market are offering, at a much more competitive rate. So this is something I look forward to: the replacement of the traditional databases with new-age ones. It's going to change the face of every business as we know it.

Conclusion

The data analytics industry is fired up. As the year continues we will see a lot more data analytics start ups raise huge sums of money, big corporates will consolidate their data operations and multinationals will set up more data centers in India, many of them joining hands with local partners. The analytics job market will be more potent than it ever was, and there will be unparalleled opportunities for those with analytic skills. Salaries will continue to increase and we will see professionals from other sectors honing their analytics skills and switching careers. The scope of analytics will so permeate India Inc., that 15 years from now, we predict that those professionals with no analytics and big data skills will have no scope for growth. This seems harsh, but that is how dynamic data analytics is and how pivotal data backed decision making will become.



As the year continues we will see a lot more data analytics start ups raise huge sums of money.

Key Data Sources

In putting together this report, we used a number of resources namely:

- Data shared by Bhasker Gupta, Analytics India Magazine
- Data gathered by Jigsaw Academy through its student and professional network
- Survey conducted by Jigsaw Academy
- Intelligence gained through numerous interactions with analytics experts and HR Professionals.
- Data from online job portals

About

Jigsaw Academy

Jigsaw Academy, the online school of analytics, was founded in 2010 to provide quality training in the field of analytics and big data. Jigsaw's founders have over 20 years of combined experience in analytics and consulting across multiple industry verticals, having served with reputed companies both in India and the US.

Jigsaw Academy has trained over 5000 students across 20+ countries in the last 4 years. Their award-winning courses are well acknowledged in the industry and Jigsaw is the approved analytics training partner for various large organizations including Accenture, Infosys and Genpact.



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