A broad study of the data science job landscape, covering profiles and roles requiring analytics or data science competencies and skills

Analytics & Data Science Jobs in India — 2022

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Dear Readers,

In the Indian analytics and data science industry, the last decade has brought epochs of change and transformation. We're entering a new era of AI, machine learning, and automation—all driven by the fantastic people entering the field. Our approach to data analysis and consumer behaviour has changed due to the pandemic. As a result, organisations are beginning to learn how to harness the power of data analytics to cause a measurable impact on their businesses.

Increasingly sophisticated analytics and new technologies have opened up a variety of opportunities for growth for organisations and professionals. Recent years have seen a dramatic change in the employment landscape for data analytics professionals. Predictive analytics and hyper-automation have enhanced data analysis and business decision-making.

This report examines and discusses key trends, career paths, challenges, and advancements in the data science and analytics job market. It takes into account disruptive technologies, autonomous systems and the reformation of business technology.

Due to the increasing volume of data and the availability of advanced analytics tools and platforms, the Indian analytics and data science job market has grown impressively over the last decade. In this report, we walk through the different aspects of the Indian data analytics industry.

By discussing the latest developments in data analytics, we can provide insight into what the industry will look like in the future. With this report, we hope you will better understand data science hiring or job trends and prove to be an invaluable resource in the data analytics industry.

Regards, **Nikhil Barshikar** Founder and CEO - Imarticus Learning







Executive Summary

The data science/analytics job report, presented by Analytics India Magazine (AIM), provides a broad study of the data science job landscape, covering profiles and roles requiring analytics competencies and skills. The research provides a holistic view of the talent market that was affected by the Covid-19 pandemic and its recovery since the lockdown restrictions were lifted. The report highlights the upswing in data science/analytics jobs in the post-pandemic world and the factors that have led to it.

This study includes a snapshot of advertised jobs in key data science roles and an overview of potential career opportunities across different skills and educational qualifications. The insights about the talent market in this study assist stakeholders in developing better plans/strategies around the recruiting process, as having a broader view of the market allows them to target the right talent faster across different categories.

This report can be studied by recruiters, industry policymakers, companies, and data science experts/aspirants to get the overall view of the job market across multiple roles, sectors, cities, experience levels, and others.







Methodology

The research presented in this report has been collected from publicly available data, including news reports, job sites, and other information sources.

The data for this report was collected around the second week of April 2022.

About Imarticus Learning

Imarticus Learning is a major Edtech company in India, offering high-quality, industry-specific education via innovative technology and specialised training and career assistance and mentorship from industry professionals. It has impacted over 10,00,000 careers within a decade through leading-edge curriculums, highly experienced faculty, and over 500 global partnerships with leading institutions and corporations. Imarticus Learning seeks to upskill both existing and future workers to fulfil current and upcoming job market demands in various industries. Its objective is to provide learners with valuable learning experiences to educate them with industryspecific skills and prepare them to take on multiple jobs in their sector. Imarticus Learning is renowned for its unique teaching methodology, including immersive live lectures (online and offline), peer-to-peer discussions, hybrid learning modules, industry-focused seminars, capstone projects, guest lectures, soft skills training, etc. It offers courses that prepare learners for successful careers in data science, analytics, finance, banking, and technology.







Key Highlights

01	02	03
Overall	Sector	Company Type
The data science/analytics jobs figure for April 2022 witnessed a 30.1% increase in open jobs compared to last year (April 2021).	Retail & CPG witnessed the highest y-o-y increase in the open jobs (146.4%) across all sectors from 3,143 in 2021 to 7,743 in 2022.	With an annual growth rate of 24.0% , more than three out of four (77.7%) open analytics jobs in 2022 are advertised by MNC IT & KPO Service Providers.
04	05	06
Work Experience	Salary Bracket	_{City}

U Education

Almost one out of three (31.2%) open jobs are for engineering undergraduates.

80

Data Science Roles

Almost one out four (24.1%) open analytics jobs are for Data Engineers. Part 1:

Top Trends in Analytics And Data Science Jobs

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Jobs Trends

(April 2014 to April 2022)



Figures in thousands

179.4K

Around 179K open jobs were available at the time of reporting in the 2nd week of April 2022

30.1%

Analytics jobs figure for April 2022 witnessed a 30.1% increase in open jobs compared to the same period last year

73.5%

Open analytics jobs in India have increased by 73.5% from the start of the pandemic in March 2020 to April 2022



Top Trends in Analytics And Data Science Jobs



Although it is difficult to ascertain the exact number of open data science/analytics jobs for a given month, around **179,470** open jobs were available at the time of reporting in the 2nd week of April 2022, according to the analysis carried out by AIMResearch. This is the second-highest number of data science/analytics jobs advertised in India (since AIM Research started recording these numbers in April 2015). It was the highest in February 2022 at **180,468**.

These open jobs can be filled in the data science/analytics function at any given point in time and not the absolute number of new jobs created each month.

The job market for analytics/data science professionals, which plunged by more than **20.1%** during the first wave of Covid-19 (from March 2020 to June 2020), has rebounded substantially post covid. There is an increase of **73.5%** in open jobs from the start of Covid-19 in March 2020 to April 2022.

There was a slight decline of **3.8%** in the open jobs between April 2021 to May 2021 during the second wave. Since then, it has again been on the rise.



Top Trends in Analytics And Data Science Jobs

The data science/analytics jobs figure for April 2022 witnessed a **30.1%** increase in open jobs compared to last year (April 2021). In 2022, India contributed to **11.6%** of the total global data science/analytics open jobs. This is a considerable jump from **9.4%** of global open jobs in June 2021. India's share of global analytics jobs has increased because of the following factors:

- The continuous investment made by domestic companies in the development of advanced data science/analytics capabilities.
- MNC and Domestic IT & KPO organisations have moved their analytics or data science jobs in large numbers to India.
- Captives Centres have been witnessing a significant increase in their open jobs as these companies focus more on transforming their technology capabilities by building data science teams in India.
- The increasing funding of Al/Analytics based startups in India—the total funding in 2021 was \$1.1B, a growth rate of 32.5% on a Y-o-Y basis. To know more about startup funding, read our report <u>here</u>.

The ten leading organisations with the greatest number of analytics jobs advertised in April'22 are dominated by the MNC IT & KPO organisations and Captives – Accenture, IBM India, Flipkart, eClerx Services, Dell International, Capgemini, Wells Fargo, Shell, United Health Group, JP Morgan.

98.6% of data science/analytics jobs advertised in India are full-time, signifying the strengthening of the Indian data science/analytics hiring market. In contrast, just **1.4%** of the jobs form part-time, internship or contractual jobs.

The top data science/analytics designations advertised are Data Engineer, Data Scientist, Deep Learning, NLP, Computer Vision, Data Architect, Big Data Analytics, AI/ML Engineer, and Statistician.

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Part 2: Data Science Jobs By Sectors

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Open Data Science Jobs By Sector



Share Of Open Data Science Jobs By Sector



Note this section considers only the key industries/sectors and excludes the open jobs in the IT sector.



Data Science Jobs By Sectors

2.5

Open jobs in Retail & CPG increased by almost 2.5 times in 2022 (7.7K jobs) compared to 2021 (3.1K jobs)

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BFSI accounts for more than one out of four open analytics/data science jobs in 2022 among all the key sectors

4.2pp

Travel & Hospitality witnessed a 4.2pp increase in its share of open jobs compared to the previous year when the sector advertised almost no jobs

The open jobs for data science professionals in new age industries are higher than in traditional industries as they are more focused on digitisation to streamline business processes.



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Data Science Jobs By Sectors

Increasing tech adoption across industries and entirely tech-enabled sectors such as eCommerce/Internet, and BFSI, has led to a growing demand for data science professionals.

With **18,712** jobs advertised in the market in 2022, the BFSI sector contributed to the highest number of jobs among all the key sectors. This was a **19.9%** increase on a y-o-y basis. Similarly, the eCommerce/Internet advertised around **13,167** in 2022, twice what the sector advertised at the same time last year.

The Retail & CPG witnessed the highest increase in the number of analytics jobs advertised. The number increased from **3,143** in 2021 to **7,743** in 2022—a y-o-y increase of almost **2.5 times**.

Post covid, the Hospitality & Travel industry is witnessing a massive increase in the open jobs. The number of total open jobs increased to **2,964** in 2022 compared to almost no jobs in 2021. The Hospitality & Travel industry was one of the hardest-hit sectors as the pandemic halted everything in the industry. This resulted in the loss of many jobs in the sector.

The open jobs for data science professionals in new age industries are higher than in traditional industries as they are more focused on digitisation to streamline business processes.

Please note that this section considers only the key industries/sectors and excludes the open jobs in the IT sector.

Part 3: Data Science Jobs By Company Type

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Open Data Science Jobs By Company Type



Share Of Open Data Science Jobs By Company Type





Data Science Jobs By Company Type

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More than three out of four open jobs (139.3K jobs out of 179.4K) are advertised by MNC IT & KPO Service Providers

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MNC IT & KPO Service Providers have consistently advertised the highest number of analytics jobs among all company types since 2019



The open jobs in domestic firms (non IT) grew close to 4.4 times on a y-o-y basis

Data Science Jobs By Company Type

MNC IT & KPO Service Providers continue to be the largest job provider for analytics professionals, accounting for 139,323 (77.7%) of all open jobs. Advertised jobs by companies in the segment increased by 24.0% on a y-o-y basis.

For captive centres, open jobs increased from 5,654 in 2021 to **19,339** in 2022. This significant rise **(242.0%)** can be attributed to some of the biggest brands in the world increasing their focus on digitisation and opting to set up captives in India to facilitate this. Furthermore, we have seen "the great resignation" wave in the last two years, which points to an increased flow of experienced and skilled talent back in the market. Captives are rushing to tap into this talent pool.

The rising footprints of multinational corporations in India to enhance productivity through tooling, automation, simulation, prediction, and optimisation are fuelling the growth of data science/analytics jobs.

The open jobs in the domestic firms (Non-IT) witnessed the highest increase (336.4%) on a y-o-y basis. The jobs advertised by these firms increased from 2,206 in 2021 to 9,628 in 2022. In terms of percentages, the share of open jobs increased from 1.6% to 5.4% over the same period of time. This growth is fuelled by the increasing adoption of data-driven technologies in traditional organisations.

On the other hand, consulting firms decreased their share of advertised jobs from 3.7% (5,102) in 2021 to 1.5% (2,633) in 2022. Also, the share of Domestic IT & KPO Service Providers has come down to 4.7% (8,476) in 2022 from 9.0% (12,411) in 2021.



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Part 4: Data Science Jobs By Experience Level

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Open Data Science Jobs By Experience Level



Share Of Open Data Science Jobs By Experience Level





Data Science Jobs By Experience Level

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More than two out of five open jobs are for professionals between 2 to 7 years of experience

4.4pp

The share of open jobs for professionals with less than two years of experience have been declining since 2020. The trend continues in 2022, with a y-o-y decline of 4.4pp

7.4

Open jobs for professionals with more than ten years of experience grew by 7.4 times from 2019 to 2022

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The highest growth in the posted jobs is witnessed by professionals with **7 to 10** years of experience, at **46.4%** on a y-o-y bais. The number of open jobs advertised in the experience bracket stood at **32,912** in 2022, which is **10,434** higher than in 2021 (**22,478**). The second-highest percentage increase in the listed jobs is observed by the professionals with an experience of 5 to 7 years. The overall open jobs in the experience bracket increased to **37,469** in 2022 from **25,787** jobs in 2021—a growth rate of **45.3%** on a y-o-y basis.

On the other hand, there has been a continuous decline in the share of advertised jobs for professionals with less than two years of experience since 2019. The share of open jobs for the experience bracket of **1-2 years** declined from **13.0%** in 2021 to **11.5%** in 2022. Similarly, the share of open jobs for less than one year of experience declined from **11.8%** in 2021 to **8.9%** in 2022. The higher cost of upskilling freshers and the instability in their retention coupled with higher demand for experienced professionals have contributed to the continual decline in the share of advertised jobs.

There has been a close to **7.4 times** increase in the demand for professionals with more than ten years of experience from 2019 (**4,828**) to 2022 (**35,681**). However, 2022 observed a slight decline in the share by **1.5pp** on a y-o-y basis from **21.4%** in 2021 to **19.9%** in 2022.

Data Science Jobs By Experience Level

Over the last few years, the share of open jobs for professionals with 0-2 years of experience has been steadily decreasing. The drop in share is attributed to a preference for experienced professionals.

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Part 5: Data Science Jobs By Salary Bracket

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Open Data Science Jobs By Salary Brackets



Share Of Open Data Science Jobs By Salary Brackets



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Data Science Jobs By Salary Bracket

15.2K

Open jobs offering a salary of 25-50 lakhs saw the highest y-o-y increase (15.2K) in absolute number from 3,585 in 2021 to 18,776 in 2022

20

Open jobs offering salaries greater than 50 lakhs increased by almost 20 times



Almost one out of four open jobs posted, offer a salary of 3-6 lakhs

An increase in the median salary commanded by analytics professionals is reflected in the greater share of open jobs offering higher salaries.

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Data Science Jobs By Salary Bracket

The open jobs offering a salary of 25-50 lakhs saw the highest increase in absolute numbers among all brackets, from **3,585** in 2021 to **18,775** in 2022. As a result, the share of these jobs as a percentage of the total increased from **2.6%** in 2021 to **10.5%** in 2022. Similarly, open jobs offering 15-25 lakhs salary increased from **12.2%** in 2021 to **17.3%** in 2022.

The advertised jobs for the professionals in the salary brackets of more than 50 lakhs also witnessed a significant increase compared to the previous year. The number increased by almost **20 times**, from **276** in 2021 to **5,472** in 2022.

The number of open jobs in the 0-3 lakh salary bracket increased from **11,722** in 2021 to **18,095** in 2022—a y-o-y increase of **54.4%**. Similarly, the share of open jobs between 3-6 lakhs increased by **32.9%** over the same period.

On the other hand, advertised jobs for data science professionals in 6-10 and 10-15 lakhs salary brackets have seen a decline in overall share in 2022. The largest decline is witnessed by the 6-10 lakhs salary bracket, at **11.6pp**, followed by 10-15 lakhs salary brackets with a decline of **7.3pp**. This reflects AIM's <u>Data Science India Salary Study 2022</u>, which indicates an overall increase in the median salary commanded by analytics professionals in 2022.

Part 6: Data Science Jobs By Cities

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Open Data Science Jobs By Cities



Share Of Open Data Science Jobs By Cities



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Data Science Jobs By Cities

28.5%

Bangalore emerged as the top destination for analytics/data science professionals for the fifth year in a row, with 51,149 open jobs, accounting for 28.5% of entire market

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Almost one out of two (47.6%) open jobs are either for Bangalore or Delhi NCR

42.9%

Hyderabad saw the highest y-o-y increase (42.9%) in the number of jobs advertised across top cities



Data Science Jobs By Cities

Bengaluru continues to create the maximum share of jobs (28.5%) of all analytics/data science positions in India in 2022. In terms of absolute numbers, open jobs have gone up from 38,474 in 2021 to 51,149 in 2022—a growth of 32.9% on a y-o-y basis. The city's high-tech IT infrastructure and the presence of many unicorn companies specialising in edtech, fintech, artificial intelligence, and other fields contribute to the city's increasing share of open jobs.

Delhi NCR emerged as the second-largest city in terms of the share of open jobs for analytics/data science professionals. The number of jobs is **34,200** in 2022, which is **7,861** higher than posted jobs in 2021. The increase in the share is supported by employees' return to the workplace at a faster rate than in other cities. The world-class infrastructure and well-diversified markets, from trading and manufacturing to BFSI contributed to an overall increase in job opportunities.

Mumbai, the third-largest city with regard to the share of open jobs, witnessed a growth of **40.2%** on a y-o-y basis. The number of jobs increased to **23,591** in 2022 from **16,824** in 2021. The increase in the number of jobs is supported by the higher demand for professionals in BFSI and domestic conglomerates which are largely based out of Mumbai.

Core IT hubs - Bangalore, Hyderabad, and Delhi NCR, are seeing an increase in job opportunities than their counterparts. These cities offer better salary hikes, job opportunities, and career growth to the professionals.





Data Science Jobs By Cities



Hyderabad has been witnessing a continuous rise in its share of open jobs on a y-o-y basis for the last couple of years. The number of jobs has gone up to **19,712** in 2022 from **13,790** in 2021, with a growth rate of **42.9%** on a y-o-y basis. A skilled workforce, large tech businesses, cheaper office space, and government initiatives towards promoting AI development and foreign investment have increased the share of data science jobs in Hyderabad.

In terms of other metropolitan cities, Chennai saw a marginal decrease of **0.3pp** in its share in 2022 **(7.5%)** from 2021 **(7.8%)**. However, the number of open jobs has increased to **13,427** in 2022 from **10,756** in 2021. The IT and ITes investment, skilled workforce, clubbed with dozens of great engineering colleges in Chennai, make recruiting easier.

In the same way, Pune, Ahmedabad, and Kolkata witnessed a marginal decline in their open jobs share. The y-o-y decline in the share is **0.4pp** and **0.5pp** in Ahmedabad and Pune, while it is **0.1pp** for Kolkata.

Part 7: Data Science Jobs By Educational Qualification

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Data Science Jobs By Educational Qualification



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Almost one out of three open jobs are for engineering undergraduates 2.2

Advertised jobs for engineering undergrads are roughly 2.2 times higher than engineering postgraduates 1.2

Advertised open jobs for MBAs are close to 1.2 times higher than Non-MBAs



Data Science Jobs By Educational Qualification



The highest share of jobs in engineering demand an undergraduate degree in engineering. This makes up a third or **55,983** of the total advertised jobs. This is followed by non-engineering undergraduate degrees at **35,201** and engineering postgraduates at **25,871**. The advertised jobs under non-engineering undergrads are largely from B.C.A, B.Sc, and B.Com backgrounds.

The number of open jobs demanding an MBA degree is **17,389**, which is close to **1.2** times of open jobs for Non-MBAs (**14,420**). The degrees considered under the Non-MBAs segment are M.Sc, M.Com, M.Ed, and others.

The number of advertised jobs for PhD is **13,996**, accounting for **7.8%** of all job postings.

Hiring managers prefer engineers over non-technical graduates as they are well-versed in technical fundamentals and can easily adapt and learn quickly.



Part 8: Open Jobs For Key Data Science Roles

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Open Jobs For Key Data Science Roles



Almost one out of four open jobs for key analytics roles are for data engineers

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Open jobs for Data Engineers are 1.8 times higher than Data Scientists

1.8

7.4%

The share of Deep Learning open jobs is the highest among all Alrelated jobs

Please note this section considers only the key data science roles





Open Jobs For Key Data Science Roles

Under key analytics/data science roles, the advertised open jobs are highest for Business Analysts at **38,974**, followed by Data Engineer **(34,566)** and Data Scientist **(19,457)**.

Advertised open jobs in key Al-related roles are highest for Deep Learning at **10,564**, followed by NLP **(8,618)**, Computer Vision **(5,810)**, and Al/ML Engineers **(2,215)**.

The rapid rise in digital transformation has increased the demand for data engineering capabilities manifold. Most companies are focusing on creating a robust data pipeline that data science teams can leverage. Currently, the dearth of data engineers is felt more than data scientists.

Please note this section considers only the key data science roles

About Analytics India Magazine

Analytics India Magazine was founded in 2012 and has since been dedicated to passionately championing and promoting the analytics ecosystem in India. It has been a pre-eminent source of news, information and analysis for the Indian analytics ecosystem and extensively covers opinions, analysis and insights on the key breakthroughs and developments in the field. It engages in the promotion and discussion of ideas with smart, ardent, action-oriented individuals who want to change the world. With a dedicated editorial staff and a network of more than 250 expert contributors, AIM's stories are targeted at futurists, AI researchers, data science entrepreneurs, analytics aficionados and technophiles.

About AIMResearch

AIMResearch provides rigorous, objective research and advisory to organizations that plan to achieve higher levels of success with their analytics implementations. Our single, overriding goal is to equip our clients with the insights, advice and tools they need to create a well-oiled, data-driven enterprise.

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