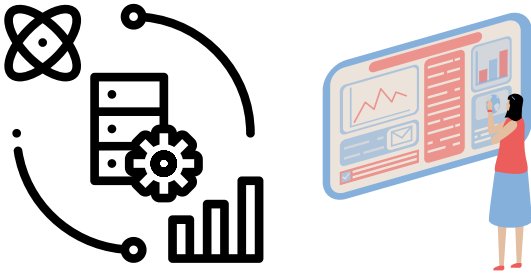


THE EDUCAFÉ TIMES



**In this issue: Unlocking Potential:
Exploring Data Science, Data Analytics
and Big Data**

**Prescribing Success: Interview with
Ms. Aishwarya Chandar, Decision
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Unlocking Potential: Exploring Data Science, Data Analytics and Big Data

"If you can't explain it simply, you don't understand it well enough."

— Albert Einstein

In today's data-driven world, "Big Data," "Data Science" and "Data Analytics" have become integral to our lives. As interest in these fields grows, many individuals in India question whether pursuing a career in Data Science is a wise choice.

At its core, Data Science focuses on extracting valuable insights from data. It goes beyond user experiences to optimise business operations. With expertise in software development, data mining, statistics, machine learning and more, Data Scientists transform raw data into valuable business insights.

Data analytics involves data gathering, cleansing and analyzing data to uncover trends and patterns and to extract meaningful insights. Data Analysts play a vital role in providing decision-makers with actionable information.

Big Data refers to vast and complex datasets that present unique challenges due to their volume, velocity, variety, and veracity. Processing and analyzing such data require specialized tools and procedures in managing and extracting insights from these extensive datasets.

Data Scientists use statistical analysis and machine learning to address complex problems; while Data Analysts focus on gathering and analysing data to drive decision-making. Big Data encompasses the challenges and possibilities of processing vast datasets. Each field serves a distinct purpose in utilising data to inform decision-making.

As the world becomes increasingly data-driven, careers in these domains offer immense promise. Roles such as Data Scientist, Data Engineer, Business Intelligence Professional, Data Manager and Data Analyst are in high demand.

Message from the Editor

Hello Readers!

We bring another edition of The Educafé Times where we talk about another sought after career opportunities - Data Science. Here we discuss the scope of the career, the challenges, and the skill sets required.

Have some new ideas for our newsletter? Share them at educafestudentsolutions@gmail.com and get a shoutout.

Happy Reading!!

CAREER PATH

- Choose Science as your specialisation at +2 level, with Mathematics as a compulsory subject.
- After completing Engineering (preferably with a Computer Science specialisation) or a Master's Degree in Mathematics/Statistics, you can pursue a career as a Data Scientist or Data Analyst.
- Some private or autonomous colleges/Universities conduct their own entrance examinations. These exams will rank you based on your performance. Your scores in your +2 exam and your entrance exam ranking influence the options available to you.
- Commerce could be a specialisation at +2 levels, with Mathematics and Statistics as one of your subjects; and you can then enrol for a Bachelor of Commerce (B. Com) degree with Mathematics/Statistics as one of the compulsory subjects.

If you need further guidance, feel free to reach out to a career counsellor or contact us. Seize the opportunity, realise your potential and embrace the exciting world of data.



Prescription to Success

I am a Decision Scientist at Meta with a BE in Information Science and Engineering from BMS College of Engineering, Bangalore and Masters in Information Systems Management from Carnegie Mellon University, USA

Snippets of an interview conducted with Ms Aishwarya Chandar.



What are the key skills and qualifications required to become a successful data scientist?

A key element of becoming a successful data scientist is having a passion for problem-solving. Skills and qualifications like a good maths and statistics foundation, solid programming knowledge in Python / R / Spark and being comfortable with different types of machine learning models will enable you to become successful more easily. But, being able to break down an abstract problem statement, identifying what data you have or need to get to answer this and then applying the right statistical technique or machine learning model is what will differentiate you in this industry. Another key skill is being able to keep up with enhancements and adapting to using new tools and techniques like what we're seeing with the Generative AI models now.

What motivated you to pursue a career in Data Science and how has your journey evolved in this field?

My journey to Data Science came quite by accident. I was on my way to becoming a software engineer since programming was always one of my strengths. I took a statistics programming course in my graduation and realised I could blend my love of maths and programming. I took on a couple more courses like Data Mining, Machine Learning which further instilled my desire to explore this career path. A summer internship at a startup as a data scientist cemented that feeling for me. Initially, I was still in the core development side, building attribution and recommendation models. To take a break from startup life, I landed a DS role in the marketing analytics field and realised I quite liked the strategic aspect of guiding business decisions with data. I've now spent over 4 years in the marketing analytics space spanning both growth and brand marketing.

How do you stay up-to-date with the latest developments and trends in Data Science?

- LinkedIn and Twitter are both great sources to keep up to date with the latest trends. Following some of the top DS voices in the industry - Andrew Ng, Cassie Kozykrov, Lex Fridman, Vin Vashishta, Abhishek Thakur to name a few.
- - TowardsDataScience, KD Nuggets are also great online resources.

What are some of the highlights and some challenges of choosing Data Science as a career?

There are always plus and minus points to any career, some plus points -

- Every industry from software/product to manufacturing to transportation uses data scientists because the ability to make business decisions guided by data rather than intuition almost always leads to better outcomes.
- It's a relatively easy industry to grow quickly in, once you've established your skills and aptitude.

Challenges include:

- The tools and technology stack are constantly improving and evolving so what you learnt or built 6 months ago can become obsolete or automated through a couple of lines of code. Keeping up with these tools can become overwhelming but it's also what makes you a well-rounded data scientist.

Can you share some real-life examples of projects you have worked on and their impact on the organisation or industry?

My career thus far has spanned a couple of industries -

I've built a recommendation engine for a large fast food chain which personalised menus, offers/discounts based on their order history.

Then I moved to the healthcare industry and built several targeting models to identify who would be interested in signing up for our product and attribution models to understand ROI of various marketing channels.

My current role is in the tech space and I work on a product that has over a billion global users. Some of my current projects include recommending features that would help different types of users feel more positively towards our product and improve engagement, measuring the impact of marketing investment and identifying markets we could potentially expand to.

Are there any specific programming languages, tools, or technologies that you recommend students learn to excel in Data Science?

Proficiency in at least one of the programming languages like Python, R, Spark and Scala will add to your advantage in Data Science and knowledge of multiple languages will benefit you as different companies differ in their tech stacks. Major cloud providers like Google, Colab and others offer free public infrastructure for exploratory analysis with simple programming interfaces.

What are some common misconceptions about data science and how would you clarify them for aspiring data scientists?

A common misconception is that by simply using data, a Data Scientist can build a highly accurate and sophisticated model. In reality, it's more important to understand the domain and ensure that the model results (however accurate) are usable and can drive business decisions.

If you're just starting on your DS journey, one piece of advice would be to focus on breadth rather than depth. Explore different types of DS problems - predictive modelling, time series forecasting, natural language models and even beyond that, developing a solution with infrastructure that can be scaled, setting up data pipelines to collect data that can be used for modelling in the future and exploring different use cases - product, marketing and operations. Having that initial breadth of knowledge will enable you to not only understand which aspect of Data Science you're skilled at and which excites you but also help you understand the entire ecosystem better in future projects and think more strategically.

Are there any specific projects, competitions or internships that students can participate in to gain practical experience in data science?

- Setting up a GitHub profile showcasing a range of projects is always a good indicator of interest and skills when applying for jobs in this field.
- Kaggle and HackerRank host several competitions that can help you get started.
- Interview Query is another great resource for practising different types of interview questions, they have a ton of practice questions / take-home assignments that are commonly asked by major tech companies.



Would you recommend this career to young students? What advice would you give to students who are just starting their journey in data science?

If you have a curious mindset, are willing to build strong fundamentals in maths, statistics and programming and like problem-solving, then I'd highly recommend considering a data science career!

Keen to know more on Data Science ?

Contact: Aishwarya Chandar
aishwarya.chandar@gmail.com

Career Queries

by : Dr. Sudha Bhogle



What are the diverse careers available for individuals who hold a B.Com degree and have obtained a qualification in Chartered Accountancy?

Congratulations on having a B.Com degree and a CA qualification! You have a wide range of exciting career paths ahead of you. Here are some potential avenues to explore:

- **Accounting and Auditing:** With your CA qualification, you can work as an auditor in a prestigious accounting firm or pursue a career in corporate accounting, where you'll handle financial statements, tax compliance and financial analysis.
- **Finance and Investment:** Your expertise in accounting and finance opens doors to roles such as financial analyst, investment banker, or portfolio manager in banks, financial institutions, or investment firms.
- **Consulting:** Many consulting firms value professionals with a strong financial background. You can provide financial advisory services to clients, assist with financial planning, or specialise in areas such as risk management or mergers and acquisitions.
- **Entrepreneurship:** Armed with a solid understanding of business principles, accounting and finance, you can start your venture. Your CA qualification will be valuable in managing the financial aspects of your business and ensuring compliance with regulatory requirements.
- **Teaching and Education:** You can teach accounting, finance, or related subjects at schools, universities or professional institutions.
- **Government and Public Sector:** Government organisations, regulatory bodies and public sector enterprises often seek professionals with accounting and financial expertise. You can contribute to financial management, auditing or policy-making in these sectors.

Remember, these are just a few examples and there are numerous other career paths you can explore based on your interests and aspirations. Continuously update your skills, stay informed about industry trends and seek networking opportunities to enhance your career prospects. Wishing you a successful and fulfilling professional journey!

We will talk about this in our next Edition.

Can you guess?

Mail us your answers at educafestudentsolutions@gmail.com

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