

# Decoding data to beat competition, reap profits

Vishnu Swaroop TNN | Updated: May 22, 2018, 16:26 IST

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Representative Image

Data is the new oil, says a modern adage. Today, every business from insurance to retail marketing is governed by information provided by data analytics. So it is natural that over the past few years, technical institutions have begun offering diploma and degree courses on the subject. Professionals in the field say big data analytics is riding the wave today similar to what

information technology did in the early 2000s.

**COURSE GUIDE**

**A combination of technical expertise and knowledge of business trends is an advantage**

**WHERE TO GO**

INSTITUTES	COURSES
Jigsaw Academy, Bengaluru	Foundation course in analytics
IMS Pro school, Mumbai	BTech in data analytics
Vellore Institute of Technology, Vellore and Chennai	BTech in data analytics
SRM Institute, Chennai	B.Tech in big data analytics and cloud computing; PG in big data analytics
Vel Tech Technical University, Chennai	BTech in computer science and engineering
Manav Rachna International Institute, Faridabad	BTech in computer science and engineering
The Neotia University, Kolkata	BTech in data analytics
IIT, Hyderabad	BTech in big data analysis

IIM, Bangalore, Kolkata and Ahmedabad have MBA and diploma in data analytics

**ADMISSION PROCEDURE**

**Eligibility:** Class XII or equivalent qualification in any stream (preferably with computer science) with a minimum aggregate score of 50%

**FEE RANGE**

₹1,60,000 to ₹6,20,000

➤ Universities have their separate entrance exams at UG level; any graduate can take it up at PG level

**WHAT'S TAUGHT**

- Inspection, transformation, and modelling of data to discover useful information for decision-making. Data Visualisation
- Research design, machine learning, big Data – Hadoop and MapReduce, computer programming such as PYTHON, GIT, UNIX, SQL & JSON

**SCOPE**

- Data Infrastructure Engineer
- Data Analyst
- Data Management Professional
- Business Analyst
- Data Science Managers
- Machine Learning Researcher or Engineer

**PAY SCALE**

- ₹4.8 lakh to ₹6 lakh (per annum)

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Today, there is a need to manage and analyse the enormous amount of data generated by digital and engineering systems, said K S Viswanathan, vice-president of industry initiatives, National Association of Software and Services Companies (Nasscom). He believes it calls for skilling graduates in data analytics. "Based on the present scenario it is projected that in 2022, the global big data analytics industry would require 3,00,000 professionals. India alone would require at least 50,000," he said.

Big data analytics involves data engineering and analytics. The first is about collecting and compiling data, getting rid of garbage values, creating a pool and feeding them into a mathematical or statistical model for processing. The results are then presented visually, based on which decisions are taken or predictions made.

Today, most organisations have realised the importance and power of data and are investing in its analysis, says Joseph Ashwin, a manager at a leading data analytics firm. "Now the post of chief information officer (CIO) is becoming popular. A CIO heads the data analytics and decision making functions of a firm," said Ashwin.

But it's not just numbers, experts say a data scientist is required to have thorough knowledge in programming, communication, mathematics, statistics, management, economics and commerce. "While a data scientist is a technical person, a business analyst is expected to be an expert both in business and data systems. This would help choose a career in either management or technical fields," said Ashwin. "Nowadays business analytics courses are tailored for such requirements. They have both MBA and data science subjects," he said.

Gauging the demand for data analysts, institutions such as Amrita Vishwa Vidyapeetham in Coimbatore have decided to start postgraduate course in data sciences. "During placements, several employers seek candidates with knowledge of data analytics. So, we are planning to introduce MSc data science from the new academic year. It would be offered jointly by the department of mathematics and computer science engineering," said Prashant R Nair, vice-chairman, department of computer science, Amrita Vishwa Vidyapeetham. Several technical institutions have also started offering big data electives. Professors of computer science and IT departments from technical institutions said elective courses in big data analytics too have high demand among undergraduate and postgraduate students.

A Kumaravel, dean, school of computing, Bharat Institute of Higher Education and Research, which offers an MTech in big data analytics for the past two years, said students were eagerly opting for the relatively new course. "The students who have done the course have got good job offers and several of them have started their own data analytics firm," he said.

The But the greatly changing scope and tenets entail that university curriculum may not be able to keep pace and so some analytics firms train people with a hands-on approach. Dhiraj Rajaram, founder CEO Mu Sigma, said: "Big Data is not just a buzzword, it is about how people make decisions — an interaction between content and context. This needs an interdisciplinary approach. However, talent with an interdisciplinary perspective is not available as schools are not able to provide exposure to the real-world problems. To bridge the gap, Mu Sigma has become a business that runs as a university, grooming interdisciplinary talent through Mu Sigma University — 800 students graduated last year from the university, including recruits from US who came down to Bangalore for training, as part of the 'Columbus Program'. A large number of Fortune500 customers also participate in our MSU program.