

ANNEXURE 47

DEPARTMENT OF 'DATA SCIENCE'

Starting a New Course in an Emerging Area: MSc in 'Big Data Analytics'

With Support from TCS through an MoU

Enterprises are moving at a fast pace. The world has witnessed a revolution in technology and India is at the epicenter of this change thus generating huge employment opportunities for the youth of the nation. There is immense untapped potential in the big data industry, globally and *Big Data Analytics is already the big thing!*

What is Big Data:

With the raise of mobile commerce, social media, and the ever expanding web technologies, large amount of data is being gathered and stored. Organizations have realized the need to utilize these large volumes of data to fuel effective and better decision making.

What Is Big Data Analytics:

Data has become ubiquitous with the exponential growth of emerging digital technologies. Managing this burgeoning volume of data every day is the latest challenge for enterprises wanting to harness it for business value. Big Data is more than a factor of size; it opens a world of opportunities to find new and valuable insights from the myriad data sources, generating data at varying speeds and types.

Why Big Data Analytics:

To make the best use of this huge volume of data it needs to be analyzed and comprehended to facilitate effective decision making and the **Big Data Analytics** enables exactly that.

Analytics today has proven to be one of the most critical ingredients of success for organizations across industries. Data-driven predictability will be the source for the new competitive advantage, where predictability becomes the driver for costs and revenue.

Big Data Analytics offers a unique assortment of advanced analytical models, tools and techniques and an ecosystem that help derive meaningful insights from data. It is also increasingly becoming a vital business dimension and a top priority for organizations.

Global Big Data Market:

Global Big Data Market is expected to reach USD 48.3 Billion by 2018. The analytics market in India is expected to grow at a rate of 15 % annually.

The Big Opportunity:

This gigantic business need has generated a huge requirement of skilled talent to undertake such analytical jobs. Skilled manpower, educated and trained in the field of

big data analytics will be required to meet this burning challenge. By 2018, big data demand will reach 4.4 million jobs globally, but only one-third of those jobs will be filled. This demand will increase in subsequent years many fold.

Present day Challenges:

The present challenge is the low availability of skilled professional manpower who can be employed for such critical applications. Technology being relatively there are not many content, published material that is available. Further the academia is unable to have access to such new technologies practiced in the Big Data Analytics industry. Hence there are not many institution that can offer programs in Bid data analytics. Hence the present availability of skilled professionals is negligibly low, thereby creating large demand-supply gap.

The need of the hour is that the user industry has to see itself in a situation that it has to dissipate the knowledge and technology in the BDA field to the academia in order that the academia may offer it to their students thereby making them available to the industry.

TCS Advantage

It is here that TCS the industry leader in Information Technology (IT) sees itself responsible for taking up the mantle over its shoulders to bring about this intervention and has envisaged a whole new long term initiative called Academia Interface Program (AIP). The AIP works closely with the academia in bringing in industry relevant curriculum in both UG and PG level , offering short term programs that can help students with instant careers, leadership connects, faculty trainings, stakeholder communication etc. One of such initiative is the launch of a full-fledged 2 year program at the masters level called MSc – Big data Analytics at leading Science colleges, and another program called M Tech – Big Data analytics in engineering colleges.

TCS with its array of product offerings, geographical spread, long standing leadership has a rich expertise in the field of Big Data Analytics. TCS foresees huge employment opportunities for professionals in The Analytics across the industry and including its own organization.

With this in the background, TCS also has entered into an association with Dr. Bimal Roy, Padmashree Awardee and former director of Indian Statistical Institute (ISI), Kolkata to bring in their expertise to support colleges to offer this **2 year full time curriculum at Masters level as M.Sc - Big Data Analytics.**

MSc – Big Data Analytics:

The Post Graduate program spans for 4 semesters, of which, 3 semesters will be focused on course work, with prime focus on mathematics, statistics, economics and computing technologies and its application in Big Data Analytics. The student will learn the fundamentals of Data, modelling migration, manipulation, cleansing and so on and on. He will learn business functions and analytics in various domains from Finance to retail to pahrma and so on.

Internship Based Project:

The 4th semester will be a full time internship in the area of Big Data Analytics, at a reputed organization involved in Big data Analytics. He may choose to undertake the internship assignment in an organization of his choice. Internships will be offered by TCS to eligible students who meet the selection criteria.

Eligibility:

3 year full time under graduation – B.Sc. in Mathematics, Statistics, Computer Science, Economics, Econometrics or Physics with Mathematics or Statistics as a major subject.

Academic certifications:

The syllabus and curriculum has been approved at the university level. Examinations and awarding certificates and the final degree will be awarded by the University.

The Gateway To A Lucrative Career:

- This uniquely designed program will create full-fledged corporate professionals, a first of its kind.
- Curriculum design is industry relevant enabling ample placement opportunities.
- The course will be taught by professors from the university, with support of experts from TCS and Indian Statistical Institute Kolkata.
- On successfully completing the course the student will be prepared to establish a flourishing career in leading organizations in the field of Big data Analytics.

Placement opportunities

Students completing this program can foresee a host of opportunities awaiting them, TCS also envisages huge requirements for such professionals. On completion of the course TCS will conduct campus interviews at the campus and offer jobs to eligible students who meet the recruitment norms prescribed by TCS. However students are open to take up opportunities elsewhere alos.

About Tata Consultancy Services (TCS) Ltd.

Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT, BPS, infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model™, recognised as the benchmark of excellence in software development. A part of the Tata group, India's largest industrial conglomerate, TCS has over 353,000 of the world's best-trained consultants in 46 countries. The company generated consolidated revenues of US \$16.5 billion for year ended March 31, 2016 and is listed on the National Stock Exchange and Bombay Stock Exchange in India. For more information, visit us at www.tcs.com.

The MoU

TCS and the university have entered into an MoU to collaborate in offering industry relevant education to students. The MoU envisages offering of the MS C in big data Analytics course and the undergraduate course in MSc Big data Analytics.

The MoU shall offer designing the MSc Big data Analytics Curriculum, support in faculty selection, training faculty at TCS and ISI Kolkata facilities, to disseminate knowledge in the subject, offer expert lectures to students, support in obtaining internships, providing course material, content and finally conduct campus recruitments and offer employment to eligible students. A copy of the MoU between TCS and the University is annexed hereto.

Benefits of the association:

This MoU and the association with TCS shall be big boon to all stake holders

Students: Students are trained in the latest technology leading them to make exceptional careers.

The current skill shortage has helped these students command high salaries and thereby helping them to pursue highly rewarding careers.

Academia: The academia gets to benefit with the inclusion of a new and latest technology

The industry: also benefits in big way by having created and has access tot a large a resource pool of trained candidates.

The program is all geared to launch in July 2016, with the first batch of students to compte the course by April 2018. The expected number intake will be 30 students per annum.

It's a WIN WIN for all stake holders.