Post Graduate Program in Big Data Analytics at St Joseph's College, Bangalore, India.

Introduction

The world is getting data-centric. Inferences and breakthroughs are much more likely to come today from big data and artificial intelligence. Data science is the wave of the future.

To respond to this paradigm shift, St Joseph's College, Bangalore, has, starting 2016, initiated a 2-year Post Graduate Program in Big Data Analytics. The program features intensive classroom lectures in statistics, computer science and machine learning, together with active lab sessions in problem solving over three semesters, and a full final semester of internship.

We see a huge demand for such skills from industry, and expect this to become the flagship course of St Joseph's College. This program enjoys the guidance and patronage of India's software giant Tata Consultancy Services (TCS), and benefits from the advice of data luminaries such as Professor Bimal Roy, who was awarded Padma Shri in 2015 for his contributions to Indian education.

Objectives

The principle objectives of this program are

(a) to augment talent supply on big data to meet burgeoning demand

 (b) to shape the evolution of big data curriculum for India

The course material has been designed with the active collaboration of both TCS and ISI, and features an optimal mix of theoretical knowledge and practical experience.

The faculty is drawn from experts and consultants from both TCS and ISI and continually enriched by an ongoing 'train the trainees' program.

 Course structure and subjects covered

The accompanying illustrations highlight the course progression and flow, and outline the major subjects taught to the students. Note that the subjects covered including practically every facet required to succeed and perform with excellence in tomorrow's data-centric world.

Students doing this course have access to a full-fledged computer lab, with all the tools and software to work on big data problems.

To promote extra-curricular activity, students have created a club to foster interactions with other colleges, solve interesting problems and listen to lectures by eminent professors and consultants.

The teaching faculty includes experienced teachers in statistics, machine learning, cyber security and computer science and guest professors drawn from TCS, ISI and other establishments working on analytics.

Computer Science
- Programming
- Data Mining
- Machine Learning
- Distributed Systems (Hadoop, Spark)

Mathematics
- Linear Algebra
- Graph Theory
- Numerical Methods
- Optimization Theory

Statistics
- Multivariate Statistics
- Probability & Stochastic Processes
- Regression Family Algorithms

Business Management
- Banking
- Marketing
- Retail
- Telecom
- Healthcare

Economics
- Basic Macro and Micro economics
- Econometrics