

Big Data Analytics

Overview

Big data are comprised of large and complex data sets that are difficult to process using traditional database management tools or data processing applications. The big data challenges include capture, storage, search, sharing, transfer, analysis, and visualization. Therefore, in the recent years, big data analytics has received wide attention by technical and business fraternity. Big data analytics can process huge amounts of data to uncover hidden patterns, correlations, and other useful information. The technologies associated with big data analytics include NoSQL databases, Hadoop, and MapReduce. This course will cover various technical aspects of big data analytics, including its applications in the business environment. The course will focus on various data-mining algorithms that can capture, analyze, and visualize the big data. A hands-on training of parallel algorithms, which can process very large amounts of data, will be given in Hadoop, MapReduce, and NoSQL database environment. The course will allow the student to understand, use, and build practical big data analytic systems by providing a balanced view of "theory" and "practice". It will provide:

- A basic understanding of the issues and problems involved in massive on-line repository systems
- An insight of currently used techniques that satisfy the needs of such massive on-line systems
- An indication of the current research approaches, which are likely to be a basis for future solutions
- An understanding of the potential strategic and competitive advantages offered to existing businesses and other entrepreneurial opportunities

Course Schedule	<div>A: Technology for big data analytics : June 30 - July 04, 2014</div> <div>B: Business applications of big data analytics : July 07 - July 11, 2014</div>
You Should Attend If...	<div>Number of participants for the course will be limited to fifty on a first-come first-serve basis. The course is designed for you, if you are</div> <ul style="list-style-type: none">▪ an entrepreneur or to-be-entrepreneur who wants to learn the innovative applications of big data analytics in the ever-changing business landscape, or▪ a student or faculty from academic institution interested in learning how to make use of big data analytics tools to derive the hidden information from big data, or▪ a practitioner who wants to explore the potential role of big data analytics to tackle complex business problems that arise in your industry.
Fees	<div>The participation fees for taking the modules is as follows:</div> <div>Participants from abroad : US\$ 500</div> <div>Industry/ Research Organizations/Student: ₹ 30000</div> <div>Academic Institutions: ₹ 10000</div> <div>The fees include all instructional materials, computer use for tutorials, and 24x7 internet facility. Accommodation can be provided to the participant on request and payment basis.</div>

The Faculty



Prof. I. J. Chiang is an Associate Professor at Graduate Institute of Biomedical Informatics, Taipei Medical University and Adjunct Professor at Institute of Biomedical Engineering, National Taiwan University. Previously, he served as a Director, NewEgg Lab. His research interests include medical informatics, soft computing, machine learning, robotics, artificial intelligence, and data mining.



Dr. Uttam Kumar Sarkar, a Professor at the Management Information System Group of Indian Institute of Management Calcutta, had obtained his B.Tech, M.Tech, and Ph.D. in Computer Science and Engineering from Indian Institute of Technology Kharagpur. He had earlier served as a senior member in a design automation company, as a faculty member of Indian Institute of Technology Delhi, and as a Visiting Faculty at the University of Miami, Coral Gables, Florida, USA. His current research interests include Business Data Mining and Social Network Analysis.



Prof. Sourangshu Bhattacharya is an Assistant Professor in the Department of Computer Science and Engineering Institute of Technology Kharagpur. Earlier, he worked as a Scientist at Yahoo! Labs, India. His research interests include machine learning and optimization, bioinformatics, computer vision, and text mining, and natural language processing.



Prof. Ram Babu Roy is an Assistant Professor in the Rajendra Mishra School of Engineering Entrepreneurship at Indian Institute of Technology Kharagpur. He has worked as a Scientist in Defense Research and Development Organization (DRDO). His research interests include modeling and analysis of complex networked systems, business intelligence and healthcare operations management.

Course Co-ordinator

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