

Preamble

The application fields in data analytics have witnessed exponential growth in the recent past. Big data and Machine learning is one of the most trending technologies along with cloud computing. Today we are generating data at a phenomenal rate using different platforms like web, mobile, sensors, video, audio etc. The challenge for handling these data comes through the well known Vs of Big data - Volume, Velocity and Variety. The need of the hour from the industry is professionals who are equipped with the necessary skill sets and tools to handle this flooding of data and to come up with significant insights that are hidden inside the data as pearls. Employment reports from firms like Gartner and LinkedIn suggest that firms engaged in these areas are in hunt for talent with computing background. Government of India has recently shared the archival data of most of its projects through the data.gov.in portal and is welcoming projects and solutions to the data challenges listed through the data hackathons. So there is a need to train our students and faculty on the relevant skills and tools in this area.

The Institute

Bhilai Institute of Technology initiated by few notable stalwarts of central India in 1986 has now evolved as one of the premier Technical and Management Institute of this part of the country imparting quality education and providing environment for academic research. BIT campus has a conducive and supportive academic ambience facilitating high quality education and research for about 3000 students of graduate, post graduate and doctoral programmes. Five of its undergraduate programs have been accredited once gain in 2017 by the National Board of Accreditation (NBA) and the institute itself has been A grade accredited by the National Accreditation and Assessment Council (NAAC) in 2017. The institute also has an installation of ISO 9001:2015.

BIT is well connected through Rail network as well as Air network of the country. BIT is at about 1km distance from the Durg Railway station on Howrah-Mumbai line and is about 45 km away from the Swami Vivekanda Airport at Raipur, the capital city of Chhattisgarh state.

The Department

The department of Computer Science and Engineering has been established in the year 1998. The department offers the undergraduate programme (BE) , post graduate programme M.Tech (Computer Networks), M. Tech (Data Science) and Ph.D in various areas of specialization. The undergraduate programme of the department has been once again accredited in 2017 by the National Board of Accreditation (NBA). The backbone of the department is quality research, experienced faculty members and latest infrastructure. The vision of the department is to provide cutting edge learning environment and nurture talent to produce world class computer professionals with ethical values who could excel in industry and research. The mission is to promote peace, prosperity and growth in society by producing competent computer professionals with strong ethics, entrepreneurial, continuous learning and research skills through quality teaching learning processes, experienced faculty and latest infrastructure.

Prerequisites

- ❖ Basic Unix Commands
- ❖ Java basics
- ❖ SQL Query knowledge for Hive Queries

Program Objective

The objectives of the programme are

- ❖ To update the competence level of faculty members by training them about the latest tools and techniques in big data analytics interactively using hands-on sessions on Hadoop and Spark.
- ❖ To facilitate the faculty members to use these tools and techniques in research and academics

Faculty Development Program On BIG DATA ANALYTICS USING HADOOP AND SPARK

(SPONSORED BY AICTE UNDER MARGADARSHAN SCHEME)

Organized By
Department of Computer Science and Engineering
(Accredited by NBA)

26th November to 1st December 2018

REGISTRATION FORM

Name :

Designation :

Organization :

Mailing Address :

E-mail :

Phone :

Complete Fee Waiver on Registrations

Date: _____
Place: _____ **Signature of Applicant**

The applicant faculty member is allowed to attend the faculty development program.

Date: _____
Place: _____ **Signature and Seal of Sponsoring Authority**

Chief Patrons

Shri Vijay Kumar Gupta *Chairman (Governing Body), BIT Trust*
Shri I.P. Mishra *Ex-GM, Bhilai Steel Plant & Member Secretary, BIT Trust*

Patron

Dr. Arun Arora *Principal, BIT, Durg.*

Co-ordinator

Dr. M.V. Padmavati *Dean (R&D), BIT, Durg.*

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Dr. Manisha Sharma *Dean (Academics), BIT, Durg*
Dr. Mohan Gupta *Dean (Infrastructure Development), BIT, Durg*
Dr. Anup Mishra *Dean (Administration), BIT, Durg*
Dr. S.K. Sar *Dean (Student Welfare), BIT, Durg*
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Mr. Sudip Bhattacharya
Mr. Dinesh Kumar Bhawnani
Ms. Swati Dewangan

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Mr. Sumit Sar	Mrs. Chaitali Choudhary
Mr. Pawan Patnaik	Mr. Sargam Gupta
Mr. Saurabh Singh	
Mr. Vivek Parghania	

Eligibility

Academicians from Engineering Colleges

Registration Fees

No Registration Fee for Academicians.

Resource Person

1. Mr. Rajan Chettri (Corporate Trainer)
2. Mr. Amil Hussain (Technical Trainer)

Address for Correspondence

Dr. M.V. Padmavati
(Professor and Head)

Department of Computer Science and Engineering
Bhilai Institute of Technology, Bhilai House, Durg
Chhattisgarh, Pin: 491001
Mobile: 9406350023
Email id: vmetta@gmail.com

Course Contents

Introduction to Hadoop

- ✓ Hadoop Distributed File System
- ✓ Installing Hadoop in multi node cluster and administration

Hadoop Distributed File System (HDFS)

- ✓ Blocks, Name nodes and Data nodes
- ✓ Metadata, FS image, Edit log, Secondary Name Node and Safe Mode

Map Reduce (Java / Python)

- ✓ Anatomy of a Map Reduce Job Run
- ✓ Splits, Record reader, Partition, Types of partitions & Combiner

NOSQL

- ✓ ACID in RDBMS and BASE in NoSQL
- ✓ Columnar Databases in Detail (HBASE)

HBase(NOSQL)

- ✓ HBase Operations (DDL and DML).
- ✓ HBase Counters and Filters

Hive

- ✓ Hive Services, Hive Shell, Hive Server and Hive Web Interface (HWI)
- ✓ Working with Partitions

SPARK

- ✓ Resilient Distributed Datasets
- ✓ Accessing sensor data and its analytics

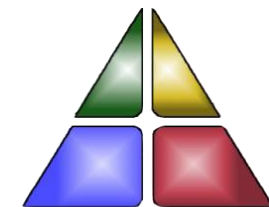
Introduction to Tableau

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ASPIRE TO EXCEL
BHILAI INSTITUTE OF TECHNOLOGY, DURG
(Seth Balkrishan Memorial)

Accredited with 'A' Grade by NAAC

NIRF 17-18 RANK-BAND: 151-200

An ISO 9001:2015 CERTIFIED INSTITUTION
BHILAI HOUSE, DURG 491001 (C.G) INDIA PHONE:
(0788) 2359297, 2359163, 2359424
FAX: (0788) 2329263

