

AICTE-CSVTU MoU Teachers Training Program-2021

CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY, BHILAI
(State Government Owned Organization)



One Week Teachers Training Program (TTP-2021)

(ONLINE MODE)

On

“MACHINE LEARNING USING PYTHON”

FDP Website

Dates: 26th MAY(Wed) – 31st May 2021(Monday)

Organized by



ASPIRE TO EXCEL

BHILAI INSTITUTE OF TECHNOLOGY, DURG– C.G
(Department of Computer Science and Engineering)

PROGRAM OBJECTIVE:

The objective of the proposed FDP is to create an awareness about the use of Python for implementing Machine Learning and Deep Learning concepts for solving real world problems.

PROGRAM OUTCOME:

After the completion of the FDP the participants would be able to more deeply understand the use of Python for implementing Machine Learning and Deep Learning. The participants would become capable of solving real world problems using Python as an effective tool.

CHIEF PATRON: [Prof. M. K. Verma, Hon'ble Vice Chancellor, CSVTU, Bhilai](#)

DIRECTOR (FDC): Col. B Venkat, AICTE, New Delhi

PATRONS: Dr. K. K. Verma, Registrar, CSVTU Bhilai, C.G.

COORDINATOR, CSVTU (AICTE-FDP): [Dr. R.N Khare, Principal, VEC Lakhapur CG](#)

Following Renowned Experts will share their knowledge with participants:

Sl. No.	Name	Designation	Institute Name
1	Dr. Deepak Garg	Professor	Bennett University, Noida U.P.
2	Dr. R. N. Patel	Associate Professor	NIT, Raipur
3	Dr. Naresh Nagwani	Associate Professor	NIT, Raipur
4	Dr. Nipun Batra	Assistant Professor	IIT, Gandhinagar
5	Dr. Udit Bhatia	Assistant Professor	IIT, Gandhinagar
6	Dr. Prashant Agnihotri	Assistant Professor	IIT, Bhilai
7	Dr. S. K. Subidh Ali	Assistant Professor	IIT, Bhilai
8	Dr. Ramalinga Cheruku	Assistant Professor	NIT, Warangal
9	Dr. V. Rao Kagita	Assistant Professor	NIT, Warangal
10	Dr. Vivek Tiwari	Assistant Professor	IIIT, Naya Raipur
11	Dr. Abhishek Sharma	Assistant Professor	IIIT, Naya Raipur
12	Dr. D. Lakshmi Padmaja	Assistant Professor	Anurag University, Hyderabad
13	Dr. Sridhar Swaminathan	Assistant Professor	Bennett University, Noida U.P.
14	Mr. Manish Kumar	Principle SWE	Oracle India

WHO CAN PARTICIPATE?

Faculty from AICTE approved institutions across the country of relevant disciplines. Priority will be given to faculty from CSVTU affiliated institutions. Batch Size is limited to maximum 100 participants.

ELIGIBLE DISCIPLINES:

All branches of Engineering, MBA, MCA and Polytechnic.

TOPICS TO BE COVERED:

- Installing Python
- Python basics
- Python lists, tuples and dictionary
- Types of machine learning
- Learning Bias and variance
- Use of Numpy and Pandas for loading and cleaning datasets
- Training and Testing Data, Data visualization using matplotlib
- Supervised Learning: Classification and Regression, KNN, Naive Bayes Classifiers, Decision Trees, Support Vector Machines
- Unsupervised Learning and Preprocessing: Dimensionality Reduction, Feature Extraction, and Manifold Learning, Principal Component Analysis (PCA), Clustering.
- Implementing supervised and unsupervised learning models using python
- Model Evaluation and Improvement: Cross-Validation in scikit-learn, Stratified k-Fold Cross-Validation, Evaluation Metrics and Scoring.
- Neural Networks: Training Neural Networks and testing

REGISTRATION: (No Registration Fees & Participation on First Come First Serve)

[Register here](#) (click on the link)

Last date for Registration: 24th May 2021, Monday

CERTIFICATION:

Certificates will be issued subject to the participants qualifying the following conditions:

- a) Minimum 80% attendance.
- b) Minimum 60% marks in the exam conducted on last day of the program.

ABOUT THE HOST UNIVERSITY (CSVТУ):

Chhattisgarh Swami Vivekanand Technical University (CSVТУ) was established by an act (No. 25 of 2004) of legislature passed by the Chhattisgarh State Govt. Assembly vide notification no. 639/21-A/Praropan/04 dt 21st January 2005 to incorporate a University and Technology for the purpose of ensuring systematic, efficient and quality education in engineering and technological subjects including Architecture and Pharmacy at Research, Post graduate, Degree and Diploma level.

The University since its inception in the year 2005 is striving hard to emerge as one of the nation's prominent Universities to fulfill its commitment to the service of state and nation. It was inaugurated on 30th April 2005 by the Hon'ble Prime-Minister of India Dr. Manmohan Singh. The University without waiting for full-fledged infrastructure development started identifying the frontier area of research and development and outreach programs for the benefit of the society. With this approach several academic programs, seminars, workshops and conferences have been conducted by the University during past 5 years.

In order to improve the standards of the education and enable the students to acquire the knowledge and skills required in the professional world the scheme of teaching, learning and syllabus was designed and implemented by way of brainstorming session, taskforce, group working and workshops on Redefining the Technical Education. The efforts have been widely appreciated and the University has earned distinction of introducing soft skills as a part of the curriculum. The courses include communication skills, group discussion, human values education, health hygiene and yoga, personality development, entrepreneurship and project based learning.

Bhilai Township considered being one of the most eminent education hubs in India. The formalities of acquisition of land have been completed and construction of the University building and related facilities are in progress. The construction of University Administrative building is complete.

Presently there are 44 Engineering Colleges, 1 Architecture Institution, 40 Polytechnics and 11 Pharmacy colleges affiliated to the University.

University has introduced digitalized evaluation system over the last few years that has brought in a sea-change in the publication of result precisely ahead of the schedule, thereby increasing substantially the available time for teaching and interaction with the students.

Owing to the different reformative measures adopted by the university, **WORLD MANAGEMENT CONGRESS**, Higher Education and Development Summit, conferred **“EMERGING TECHNOLOGICAL UNIVERSITY OF THE YEAR AWARD”** on 30th Dec 2011 during the global meet held at world Management Congress New Delhi. The Chief Minister, Chhattisgarh has expressed his happiness – which in fact has added another new dimension to the enhancement of visibility of the University in the current challenging scenario of upgrading educational standards.

ABOUT THE HOST INSTITUTE (BIT, DURG):

Bhilai Institute of Technology, Durg affiliated to **Chhattisgarh Swami Vivekanand Technical University Bhilai** initiated by notable stalwarts of central India in 1986 with a vision to become one of the Premier Technical and Management Educational Institutions in the Country, delivering excellent professional education, creating value based, globally competitive professionals and achieving excellence in all our endeavors BIT campus has a conducive and supportive academic ambience facilitating high quality education and research for more than 4000 students of bachelors, masters and doctoral programs. BIT, Durg is the first technical institute in the state to be conferred **Autonomous** Status by UGC, Government of India. Seven of its undergraduate programs have been **accredited by NBA** and the institute itself has been **“A” grade accreditation by NAAC**. The institute stands in NIRF 2020 Rank-band: 251-300 in the category of Engineering. Under **AICTE Margdarshan Scheme**, the institute is mentoring ten technical institutions to encourage best practices.

The Department of Computer Science and Engineering was established in 1998. As on date, the department steers itself with a Vision 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 prime educational objective is spreading engineering ethics, domain prospects, diversification and self-sustained learning environment among budding compu-technocrats. The department offers two under-graduate courses: B.Tech(Computer Sc. and Engineering) and B. Vocational Training (Software Development); Post-graduate course: M.Tech(Data Science) as well as doctoral courses in major and allied specializations of the discipline. The backbone of the department is reflected by at-par-quality research of international and national reputes, experienced teaching fraternity and latest infrastructure sufficing the flagship of the excelling department in all endeavors. The B.Tech(CSE) program of the department is accredited by the National Board of Accreditation (NBA) for third time till 30.06.2023.

HOST INSTITUTE PATRONS

Dr. Arun Arora, Director, BIT, Durg

Dr. Mohan Gupta, Principal, BIT, Durg

PROGRAM CO-ORDINATOR

Dr. Partha Roy, Department of CSE, BIT, Durg

Mobile No. 9406204557 (Whatsapp) Email: patsroy@gmail.com

PROGRAM CO-COORDINATOR

Dr. M.V. Padmavati, Department of CSE, BIT, Durg

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Date: 26th May(WED) – 31st May(MON) 2021

Organized by

Department of Computer Science and Engineering

Bhilai Institute of Technology, Durg

PROGRAMME SCHEDULE

Date	10:30AM – 12:00 PM	12:15PM-1:45PM	2:30PM-4:00PM	4:00PM-5:00PM
Day-1 (26-05-2021) (Wednesday)	<p><u>[Inaugural Session]</u></p> <ul style="list-style-type: none"> • Welcome Address: M.V. Padmavati • Chief Guest – Hon’ble VC – Prof. M. K. Verma, CSVTU – Bhilai. • Guest of Honors – Col. B. Venkat, AICTE - New Delhi. • Patron – Dr. K. K. Verma, Registrar CSVTU • CSVTU Coordinator – Dr. R.N. Khare • Director, BITD – Dr. Arun Arora • Principal, BITD- Dr. Mohan Gupta 	<p><u>Session 1</u></p> <p>Topic: Machine Learning and types of machine learning, bias and variance</p> <p>Speaker: Dr. Deepak Garg Bennett University, Noida</p>	<p><u>Session 2</u></p> <p>Topic: Python installation, basics, control structures, functions and strings</p> <p>Speaker: Mr. Manish Kumar Oracle India</p>	<p><u>Session 3</u></p> <p>Topic: NEP-2020: Way Ahead</p> <p>Speaker: Col. B. Venkat, Director AICTE, New Delhi</p>

PROGRAMME SCHEDULE

Date	10:30AM – 12:00 PM	12:15PM-1:45PM	3:00PM-4:30PM
Day-2 (27-05-2021) (Thursday)	<u>Session 4</u> Topic: Supervised Learning: Classification and Regression Speaker: Dr. Vivek Tiwari IIIT, Naya Raipur	<u>Session 5</u> Topic: Classifiers and Their Training and Testing Protocols Speaker: Dr. Abhishek Shrama IIIT, Naya Raipur	<u>Session 6</u> Topic: Python lists, tuples, sets, dictionary Speaker: Dr. V. Rao Kagita NIT, Warangal
Day-3 (28-05-2021) (Friday)	<u>Session 7</u> Topic: Decision Trees, Support Vector Machines Speaker: Dr. Udit Bhatia IIT, Gandhinagar	<u>Session 8</u> Topic: Use of Numpy, Pandas for Data Set Loading and Cleaning Data Sets” Speaker: Dr. Nipun Batra IIT, Gandhinagar	<u>Session 9</u> Topic: Training and Testing Data, Data Visualization Using Matplotlib” Speaker: Dr. V. Rao Kagita NIT, Warangal
Day-4 (29-05-2021) (Saturday)	<u>Session 10</u> Topic: Unsupervised Learning, Clustering and Its Implementation in Python Speaker: Dr. Naresh Nagwani NIT, Raipur	<u>Session 11</u> Topic: Dimensionality Reduction, Feature Extraction, Principal Component Analysis (PCA) Speaker: Dr. Ramalinga Cheruku NIT, Warangal	<u>Session 12</u> Topic: National Educational Policy(NEP)-2020 Speaker: Dr. R. N. Patel NIT, Raipur

PROGRAMME SCHEDULE

Date	10:30AM – 12:00 PM		12:15PM-1:45PM		3:00PM-4:30PM
Day-5 (30-05-2021) (Sunday)	<u>Session 13</u> Topic: Implementing Supervised and Unsupervised Learning Models Using Python. (Except Clustering) Speaker: Dr. D. Lakshmi Padmaja Anurag University, Hyderabad		<u>Session 14</u> Topic: Neural Networks: Training Neural Networks and Testing” Speaker: Dr. S. K. Subidh Ali IIT, Bhilai		<u>Session 15</u> Topic: Model Evaluation and Improvement: Cross-Validation in scikit-learn, Stratified k-Fold Cross-Validation, Evaluation Metrics and Scoring Speaker: Dr. Sridhar Sawminathan Bennett University, Noida
Day-6 (31-05-2021) (Monday)	<u>Session 16</u> Topic: Application of Machine Learning in Power System” Speaker: Dr. Prashant Agnihotri IIT, Bhilai		<u>Feedback and e-Test</u> <u>(80% attendance and 60% passing in test)</u>		<u>Valedictory</u> <ul style="list-style-type: none"> • Chief Guest – Hon’ble VC – Prof. M. K. Verma, CSVTU – Bhilai. • Guest of Honors – Col. B. Venkat, AICTE - New Delhi. • Patron – Dr. K. K. Verma, Registrar CSVTU • CSVTU Coordinator – Dr. R.N. Khare • Director, BITD – Dr. Arun Arora • Principal, BITD– Dr. Mohan Gupta • Vote of Thanks: Dr. Partha Roy