

Schedule for Online FDP on “**Data Science for ALL**”
(Jointly by E&ICT Academies – NIT Warangal and IIITDM Jabalpur)

Participating Academies: NIT Patna, IIITDM Jabalpur and their remote centers and NIT Warangal.

NIT Warangal will deliver lectures and demos through platform of Codetantra.

Academies are requested to send soft copy of names, email ids of participants registered with them.

Dates in 2020	10 a.m.-12 noon	2 pm - 4 pm	Tests
27-July	Mathematical Foundations- DVS	Statistical Foundations Part 1 - VR	
28-July	Python for Data Science Part1- AG	Statistical Foundations Part 2– VR	
29-July	Python for Data Science Part2- AG	Graphical Analysis - DVS	Assignment Test–1
30-July	Statistical Foundations Part 3– VR	Data Wrangling – PRK	
31-July	Holiday (Bakrid)		
1-August	Data Preprocessing – AG	Linear Model Subset Selection, Cross Validation Techniques – DVS	
2-Aug	R Programming Part 1 – TRK	Classification – Part 1- AG	Assignment Test -2
3-Aug	Holiday (Rakhi/Raksha Bandhan)		
4-Aug	Classification :Decision Trees-RBS	Classification: Other Methods- RBS	
5-Aug	Clustering : AG	Text Processing : AG	
6-Aug	R Programming Part 2 – TRK	Map Reduce - RBS	
7-August	Deep Learning Part 1– MAK	Deep Learning Part 2 – MAK	Assignment Test -3
<i>Respective academies will conduct Assignment tests to the participants enrolled with them and Evaluate.</i>			
<i>e- Certificates will be sent on 11 August 2020 through email after evaluating Assignment Tests</i>			

(Resource Persons are requested to set relevant assignment test questions and send the same with keys to rbvs66@gmail.com and atul@iiitdmj.ac.in (Dr Atul Gupta, Head Dept of CSE, IIITDM Jabalpur)

The following Resource Persons will teach their Topics (theory and /or practical demo sessions)

1) DVS : Prof DVLN Somayajulu, Director, IIITDM Kurnool (3 sessions)

email: somadvlns@gmail.com, Mobile 98493 36547

27th July Forenoon: Mathematical Foundations: Matrix Theory- Matrix Decomposition, Linear Algebra Fundamentals, Vector Spaces.

29th Afternoon: Graphical Analysis: Histograms and frequency polygons, Box-plots, Quartiles, Scatter Plots, Heat Maps Programming for basic computational methods such as Eigen values and Eigen vectors, sparse matrices, QR

1st August Afternoon: Linear Model Subset selection methods and cross validation techniques

2) VR: Prof V Ravindranath, PhD (IITDelhi), Professor at JNT University, Kakinada (3 sessions)

email: nath_vr@yahoo.com, Mobile: 97015 84555 :Statistical Foundations Part 1,2, 3:

27th Afternoon: Statistical Measures, Probability basics, density function, variance, conditional probability, Overview of Random variables and distributions, Statistical learning, Assessing model accuracy, Simple Hypothesis Testing, Student's t-test, paired t and U test, correlation and covariance, tests for association

28th Afternoon: Descriptive Statistics, Dependent and Independent events. Regression, Linear Regression: Simple and multiple linear regressions,

30th Forenoon : Comparison of Linear regression with K-nearest neighbors. Markov Chains

3) AG: Dr Atul Gupta, Ph.D. (IIT Kanpur) IIITDM Jabalpur – 4 sessions

email: atul@iiitdmj.ac.in , Mobile: 94 2515 2499

Forenoon on 28th and 29th July: Python for Data Science: Normal Python, NumPy, Pandas, Matplotlib

1st August Forenoon: Data Preprocessing : Data Cleaning, Dimensionality Reduction, SVD, PCA and other methods.

2nd August Afternoon: Classification Part-1: Logistic Regression and other kinds of Regression, LDA and comparison of classification methods

5th August Forenoon: Clustering and Afternoon : Text Processing

4) PRK: Prof P Radha Krishna Ph.D. (IIIT Hyd), NIT Warangal (1 session) –

email: pisipati.radhakrishna@gmail.com, Mobile: 97049 88816

30th Afternoon: Data Wrangling: Data Acquisition, Data Formats, Imputation, The split-apply-combine paradigm. Descriptive Analytics: Data Summarization, Data de- duplication, Data Visualization using CUBEs.

5) TRK: Dr T Ramakrishnudu, Ph.D. (NIT Warangal), NIT Warangal: 2 sessions

email: trk@nitw.ac.in, Mobile: 94901 64978

2nd August Fore noon and 6th Forenoon: R Programming for Data Science: R Environment, Data Wrangling, Data Visualization, Linear Models , Non Linear Models, Programming.

6) RBS : Prof RBV Subramanyam, Ph.D. (IITKgp) NIT Warangal – 3 sessions

email: rbvs66@gmail.com, Mobile: 949 134 6969

4th Forenoon and Afternoon: Classification – Decision Trees, Naïve Bayesian Classifier,

6th Afternoon: Handling Large Datasets: MapReduce

7) MAK: Dr M Anand Kumar, NITK Surathkal: 2 sessions

email: m_anandkumar@nitk.edu.in, Mobile: 9894 75 34 37

7th August: Deep Learning along with Scikit, Keras and TensorFlow: Practice on ML topics.