



# INDIAN STATISTICAL INSTITUTE SQC & OR Unit HYDERABAD

announces

### **Foundation Course**

on

## **Machine Learning using Python**

Ph-I: 19 – 21 June 2020

&

Ph-II: 02 - 04 July 2020

#### Venue

# SQC & OR UNIT INDIAN STATISTICAL INSTITUTE

Road No.8, Habsiguda Hyderabad – 500 007

Phone: 040 2715 3984

040 2717 1906 FAX : 040 2717 3602

040 2717 9402

e-mail: daisihyd@gmail.com

Website: www.isihyd.ac.in

#### **Program Objectives**

To acquaint and provide hands-on experience to participants on various Statistical and Machine Learning Techniques using Python.

#### **Program Benefits**

Participants will acquire knowledge on

- Data summarization, visualization, aggregation and preprocessing
- Application of unsupervised learning techniques
- Application of supervised (predictive modeling) learning techniques
- Evaluating model significance, accuracy, adequacy and generalizability
- Additionally, gain hands-on experience on the usage of opensource package Python

#### **Eligibility**

Any science or engineering graduate working in the analytics field or aspiring to get into analytics can participate in the program. The knowledge of a programming language is desirable but not essential.

#### **Course Content**

- 1. Introduction to Analytics
- 2. Introduction to Python
- 3. Data Summarization, Visualization & Aggregation Techniques
- 4. Data Preprocessing Techniques
- 5. Tests of Hypotheses
- 6. Factor Analysis
- 7. Cluster Analysis
- 8. Linear Regression
- 9. Classification and Regression Tree (CART)
- 10. Random Forest
- 11. Bagging
- 12. Naïve Bayes Classifier
- 13. K-Nearest Neighbor
- 14. Support Vector Machine (SVM)
- 15. Model Parameter Tuning Techniques
- Every participant shall carry laptop-computer preloaded with Python 3.0

#### **Certification criteria**

Successful Completion Certificate will be issued to the candidates securing Qualifying Marks in the TEST conducted on the last day.

#### **Venue & Timings**

Lecture sessions and Practical sessions shall be held during Ph-I : 19-21 June 2020 and Ph-II : 02-04 July 2020 at the Seminar Hall, Indian Statistical Institute during 09.30 a.m. to 05.30 p.m.

#### **Faculty**

Senior Specialists from Hyderabad and Bengaluru branches of Indian Statistical Institute.

#### **Participation Fee**

Rs. 20,000 + GST@18% (i.e., Rs.23,600/- per participant inclusive of course kit, lunch & refreshments).

#### Payment Options:

- i) Demand Draft drawn in favour of INDIAN STATISTICAL INSTITUTE payable at Hyderabad.
- ii) Online Transfer: Syndicate Bank, J S N Colony Branch, Habsiguda, Hyderabad. Name of Accountholder: Indian Statistical Institute, Current A/c No: 30451010000079, IFSC Code: SYNB0003045

Participants making payment through 'Online transfer' shall first verify the availability of seats, and make payment only after confirmation from us.

#### Last date

Last date for submission of Registration form: 11 June 2020 (Subject to availability of seats). Registration is on first-come-first-served basis.

**Program Facilitator** 

#### **Program Director**

 Dr. S M Subhani
 Mr. K Venkata Ramana

 Mobile: 98493 23071
 Mobile: 93465 60442

#### **INDIAN STATISTICAL INSTITUTE**

The INDIAN STATISTICAL INSTITUTE founded by Prof. P C Mahalanobis, FRS, is an Institution of National Importance, declared by Act of Parliament and funded by Government of India. It is an Institute of academic excellence offering educational courses at Graduate, Post graduate and Research levels. The scientific activities of the Institute are carried out through different Divisions.

#### Role of SQC & OR Division

- The Pioneer and Leader in blending Statistical Theory with Practice.
- To disseminate the basic concepts and techniques of Quality Improvement through Training programs, Workshops and In-house programs.
- To render Training, Consultancy services to industries in SQC, Six Sigma (GB, BB & MBB), ISO 9001, ISO 14001, ISO 45001, IMS(ISO 9K/14K/45K), ISO/TS 16949 and related areas.
- To provide solutions to the problems pertaining to Business Decision Processes with the aid of Statistical and Operations Research methods.

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#### **REGISTRATION FORM**

Organ	nization :	140151				
Conta	ct Person:					
Mailin	g Address:					
Phone : (M)		(O)		(R)		
e-mail :			FAX:			
Partic	ipant(s) details :					
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	ii) Typed copy of this iii) Participants makil	form may be used in			ty of	
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Please	e e-mail, post or	FAX the filled in	form addressed t	to the Program Dir	ector to our	

office address given above.