



HANDS-ON 2-DAY WORKSHOP ON STATISTICAL DATA ANALYSIS USING R

8th-9th December 2018

Organized by
Department of Mathematics
VIT-AP, Amaravati
Andhra Pradesh

ABOUT VIT-AP

Consistently ranked among the top educational institutes in the country, the VIT group of institutions have a proud tradition of pursuing knowledge and excellence. In keeping with this VIT tradition, the leadership at VIT-AP resonates a dynamic blend of academic initiative and industry partnership with a vision of creating one of the finest academic destinations in India. With several years of educational, industrial, and administrative experience, VIT-AP is helmed by **Dr. G. Viswanathan**, Chancellor, founder of VIT group of institutions; along with the core group comprising **Dr. Sekar Viswanathan**, Vice-President; **Dr. Sandhya Pentareddy**, Executive Director; **Dr. D. Subhakar**, Vice-Chancellor; and **Dr. C.L.V. Sivakumar**, Registrar.

VIT-AP, offers several avenues to explore varied interests, identify core competencies, and engage in an evolving lifecycle of education and growth. With flexible courses and a unique teaching-learning experience, state-of-the art facilities, focus on continuous assessment and emphasis on practical learning, a student-oriented mentoring scheme, extra-curricular activities, several international collaborations, placement opportunities and much more, VIT-AP ensures that students are informed, inspired, and engaged in an enriching experience at the institute.

ABOUT THE WORKSHOP

Data forms the foundation of the Digital Age. Learning how to organize, analyze, and interpret large data sets from industry, academia and scientific research circles and extracting useful information has become essential for a wide range of professionals who want to analyze and derive meaning from large data sets. The R programming language is a flexible, powerful, and free software that offers powerful statistical techniques, elegant data visualization capabilities, high extensibility, and an active community that generates code packages for the user. This 2-day workshop aims to provide participants with essential skills through hands-on lectures by an industry expert for analyzing data with R programming.

AGENDA

DAY - 1

- Registration, kits collection
- Inauguration

HIGH TEA

- Familiarizing with R environment, Basic R concepts, Arithmetic and logical operations, Creating vectors, combining vectors and repeating vectors, vector arithmetic and vector index, creating lists, sub-setting lists (with examples) (Lab experiments)
- Creating matrices and matrix operations; Creating data frame and modifying the data frame; Getting data into and out of R - reading CSV, EXCEL, SPSS files and working with other data types (with examples) (Lab experiments)
- Creating functions; Control statements in R; Manipulating and Processing data- creating subsets, use of merge function, sorting and ordering of data. Group manipulation using apply functions (with examples) (Lab experiments) etc.

LUNCH BREAK

- Base graphs: Histograms, scatter plots, bar plot, dot plot, Q-Q plot etc. (with examples) (Lab experiments)
- Descriptive statistics- Frequencies and cross tabs, Measures of central tendency, measures of dispersion (with examples) (Lab experiments)

TEA BREAK

- Distributions: Binomial distribution, Hyper geometric distribution, Poisson distribution, Normal distribution etc.

DAY - 2

- Lab experiments
- Hypothesis testing: Null hypothesis and Alternative hypothesis, Type I and Type II errors, One sample and Two sample tests for means and Proportions, Paired t-test, F-test for variance.

Continue....

TEA BREAK

- Lab experiments
- Chi-Square Test - Chi-square for Goodness of fit, Chi-square test for independence; Analysis of variance - One-way ANOVA, Two-way ANOVA with and without Replication

LUNCH BREAK

- Lab experiments
- Correlation and Regression Analysis: Correlation Analysis, Simple linear regression, Multiple Linear regression and Diagnostic analysis of Regression
- Lab experiments

TEA BREAK

- Valedictory/Certificate distribution

RESOURCE PERSON (INDUSTRY EXPERT)

- **Dr. S. Yadavendra Babu**
 - **Manager and Technical Specialist (FA and R & D)**
Ford Motor Company, Chennai,
 - **Senior Data Analyst**

WHO CAN ATTEND?

Faculty Members/ Industry Persons/ Research Scholars/
PG Students from any discipline (CSE/ MECH/ EEE/ ECE/
MATH/ Any other)

REGISTRATION DETAILS

- Registration is on a **first-come, first-served basis.**
- Intake: **60 candidates** [Only online registration is accepted.]
- For online registrations, fill the form given below:
<http://vtop1.vitap.ac.in:8080/seminar/registration>

CONTACT FOR REGISTRATION

- **Dr. Venkatrajam Marka**
Professor, Department of Mathematics
Phone: 94918 19300
E-mail: v.marka@vitap.ac.in

FEES

- Research Scholars / PG Students : **Rs. 700/-**
 - Academicians / Industry Persons : **Rs. 1200/-**
- Note:** Fees will not be refunded in case of any cancellation.

IMPORTANT DATES

- Last date of Registration : **19th Nov 2018**
- Last date of Payment : **19th Nov 2018**

CONTACT

- **Convener : Dr. S. Srinivas**
Senior Professor, Department of Mathematics
Phone: 98942 43574
E-mail: srinivas.s@vitap.ac.in
- **Co-Convener : Dr. Santanu Mandal**
HOD, Department of Mathematics
Phone: 70035 82476
E-mail: hod.math@vitap.ac.in

Transport will be provided from AP Secretariat to
VIT-AP, Amaravati. Participants are requested to
make their own arrangements for accommodation.

For more details, visit us on : www.vitap.ac.in

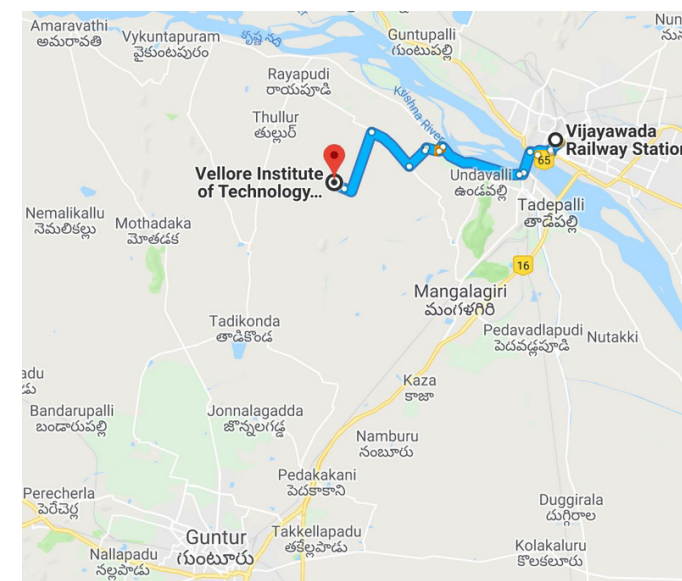
Follow us on :  [/vitap.university](https://www.facebook.com/vitap.university)



VENUE

VIT-AP
Inavolu, Beside AP Secretariat
Amaravati, Andhra Pradesh - 522237

HOW TO REACH VIT-AP CAMPUS ?



Google Maps Keyword : VIT AP CAMPUS