



# MAHARAJA AGRASEN INSTITUTE OF MANAGEMENT STUDIES

(A Unit of Maharaja Agrasen Technical Education Society)

Affiliated to GGS IP University; Recognized u/s 2(f) of UGC

Recognized by Bar Council of India; ISO 9001: 2015 Certified Institution

Maharaja Agrasen Chowk, Sector 22, Rohini, Delhi -110086, INDIA

Tel. Office: 8448186947, 8448186950 [www.maims.ac.in](http://www.maims.ac.in)

## Report on

### “Python for Data Science 1.0”

#### **Student Development Workshop on Python for Data Science 1.0**

**Theme:** Python for Data Science 1.0

**Organizing Department:** Commerce Department

**Head of the department:** Prof. (Dr.) Manju Gupta

**Student Beneficiary:** 57

**Convener-** Mr. Praveen Kumar Singh, Assistant Professor

**Co Convener:** Ms. Shreya Garg, Assistant Professor

**Date:** March 13 - 17, 2023

**Time:** 2:00 pm to 4:00 pm

**Venue:** Online- Google Meet: <https://meet.google.com/xfh-owqo-znn>

**Resource Person:** Mr. Praveen Kumar Singh, Assistant Professor

### OBJECTIVES OF THE WORKSHOP

- To provide students with an in depth knowledge of data science and its practical applications.
- To help students to explore and work with various Python tools, variables, and operators.
- To experience the magic of data science for analyzing and understanding large volumes of data, and to become familiar with data analysis and visualization.

## **Report**

Data is meaningless until it is transformed into valuable information. In Data Science, large datasets containing structured and unstructured data are mined to identify hidden patterns and extract actionable insights. Data Science enables companies to efficiently understand gigantic data from multiple sources and derive valuable insights to make smarter data-driven decisions. Data Science is widely used in various industry domains, including marketing, healthcare, finance, banking, policy work, and more.

With this aim and foresight, the Department of Commerce presents a student development workshop on "Python for Data Science 1.0" which was designed to help students to explore and work with various Python tools, variables, and operators, to acquire knowledge about data science and its application in the world today, to experience the magic of analyzing and understanding large volumes of data, and to become familiar with data analysis and visualization.



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**The total Duration of the course was 10 Hours. Certification of workshop has laid down criteria wherein participants must have 80% attendance, 70% marks in assessment and mandatory Feedback.**

**The total number of students who participated in the student development workshop was 57, and 43 students completed the course successfully.**

This 5-day course began on 13th March 2023 and consisted of five sessions that were carefully designed to impart students with the basics of Data Science using Python as well as an array of practical applications.

The first session introduced the students to Python programming and its importance for Data Science. **Python** is a very popular general-purpose interpreted, interactive, object-oriented, and high-level programming language. In this lesson, students learned about variables, loops, data types, and operators associated with them

During the second session, the students were introduced to Numpy. **It provides tools for handling n-dimensional arrays and is a general-purpose array processing package in Python.** It provides various computing tools such as comprehensive mathematical functions, linear algebra routines

In the third session, the students were introduced to Pandas data frames and data frame operators. Students learned how to read files and conduct exploratory data analysis throughout this session as well.

The students learned about data preparation and processing in the fourth session. Real-world data typically includes noise, and missing values, and may be in an undesirable format, making it impossible to build data science models on it directly. Data preprocessing is a necessary step in cleaning the data and preparing it for a data science model, which also improves the model's accuracy and effectiveness.

Data visualization is essential to assist businesses in quickly identifying data trends, which would otherwise be a hassle. The pictorial representation of data sets allows analysts to visualize concepts and new patterns. With the increasing surge in data every day, making sense of the quintillion bytes of data is impossible without Data Proliferation, which includes data visualization. These goals guided the introduction of data visualization to students in session five using scatter plots, line plots, and bar plots.

Such courses always give students a leg up when applying for jobs in the business world. Data science expertise is increasingly a must for every industry and position. The credit for this ambitious initiative goes to Prof. (Dr.) Rajni Malhotra Dhingra, Director, MAIMS and Prof. (Dr.)



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Manju Gupta (HOD, Commerce) and her team. Their constant support and encouragement helped in the successful accomplishment of this program.

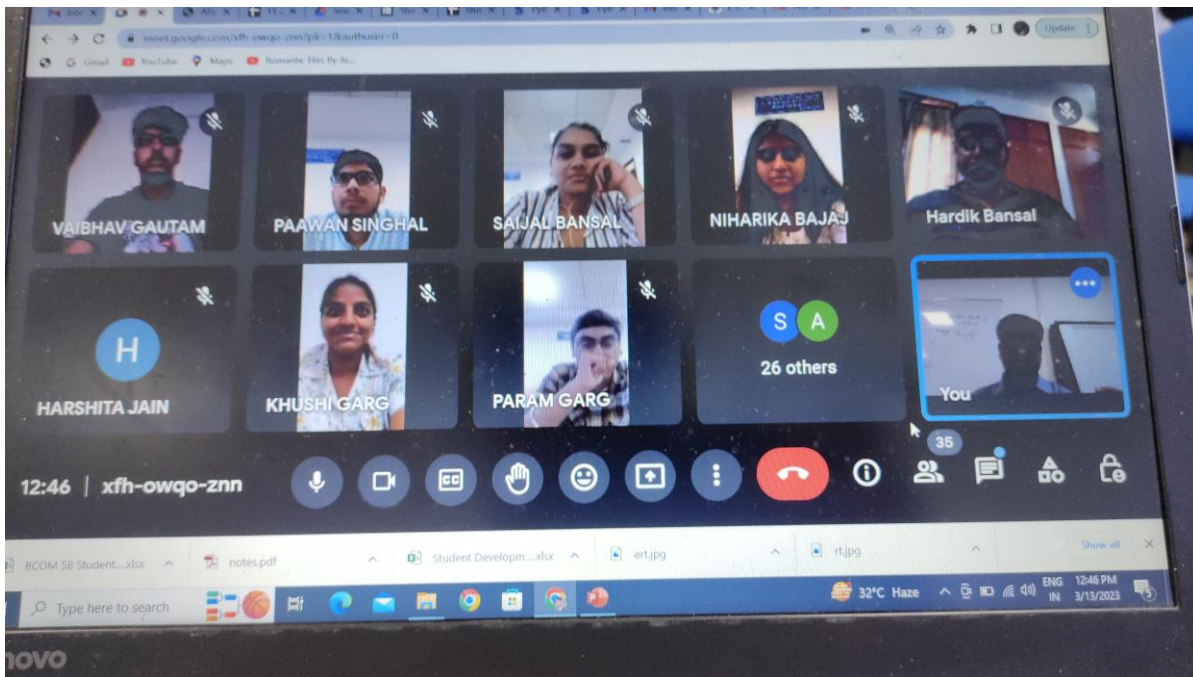
List of Top Performers of the Student Development Program Workshop

NAME	COURSE & COLLEGE
SIMRAN GANDHI	BCOM(H), MAIMS
RAGHAV	BCOM(H), MAIMS
KRITIKA GARG	BCOM(H), MAIMS
TANISHQ KOHLI	BCOM(H), MAIMS
AMARTYA	BCOM(H), MAIMS

## Learning Outcome

- The participants gained insight into the application of data science in the real world.
- The participants gained an understanding of the basics of Python, Numpy, and Pandas data frames.
- The participants will be able to pre-process data, analyse data, and visualise data using Python.

## Glimpses:



DAY 1: 13/0/2023



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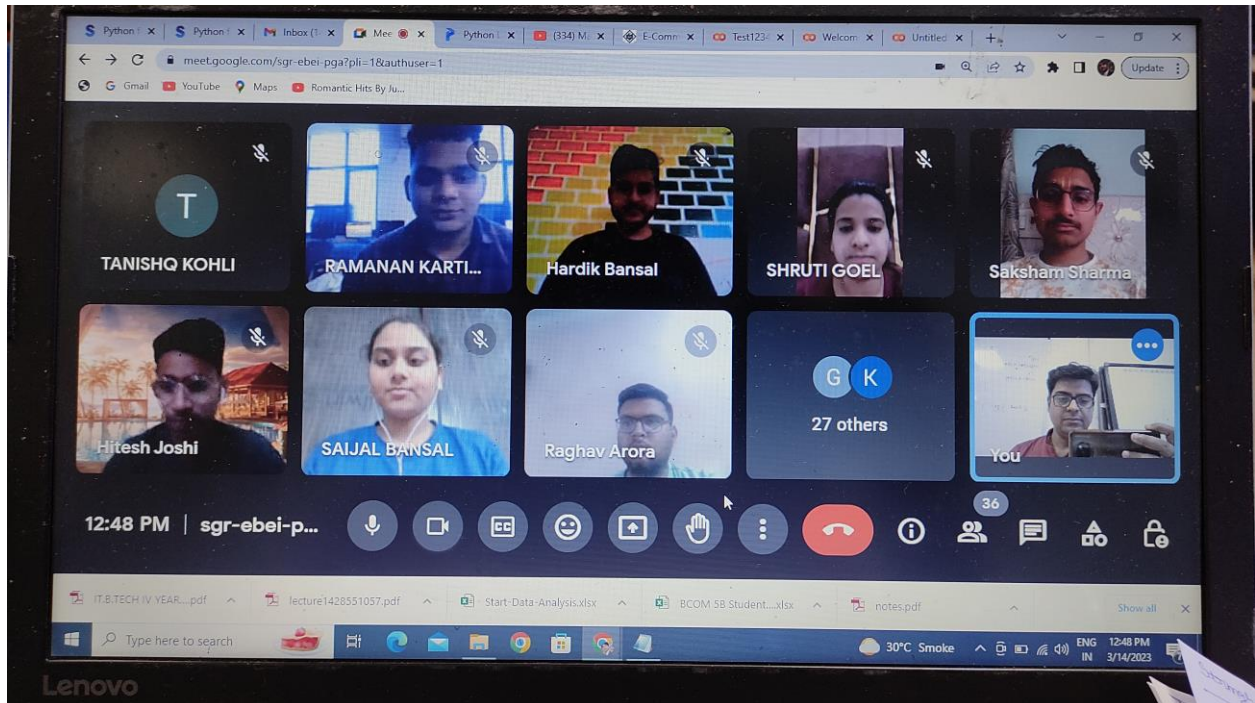
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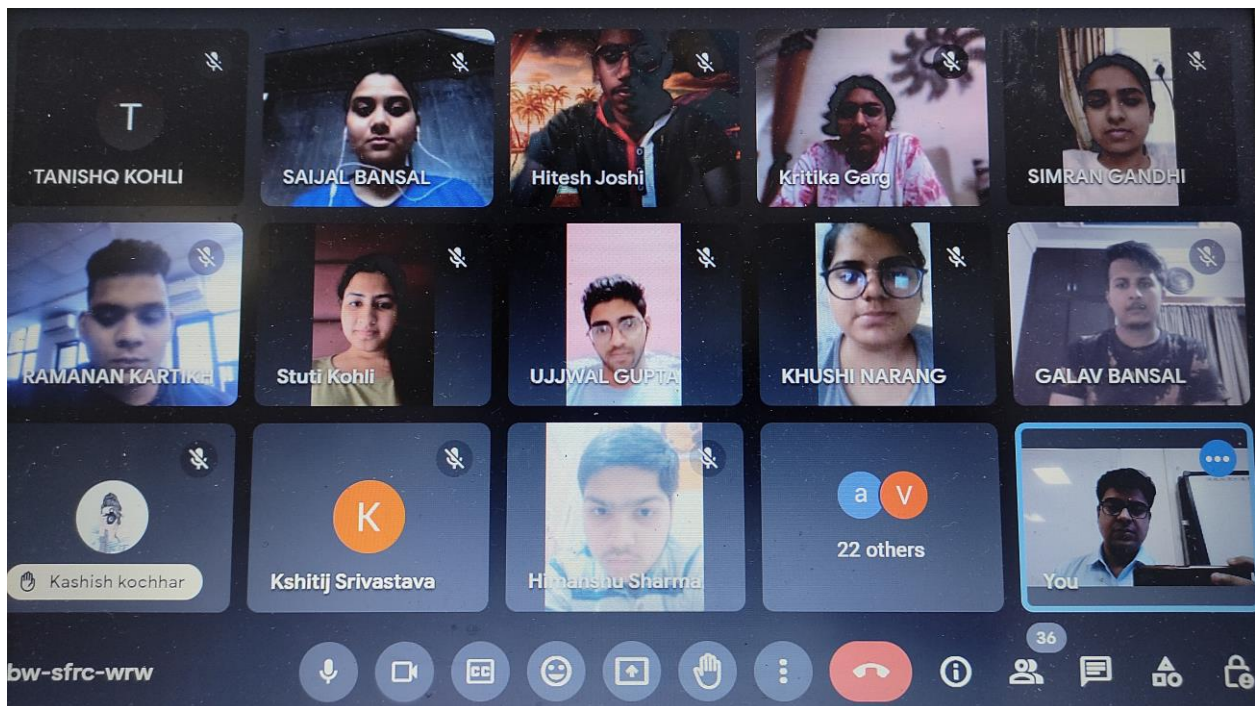
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DAY 2: 14/0/2023



DAY 3: 15/05/2023



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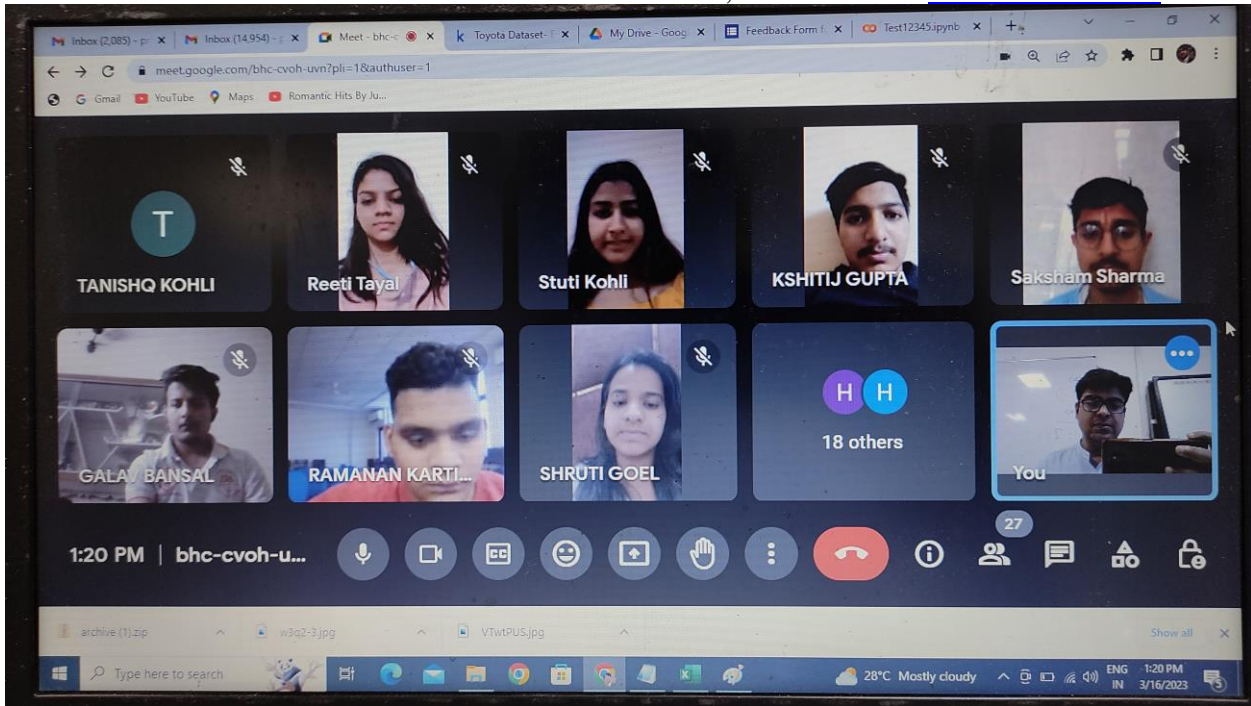
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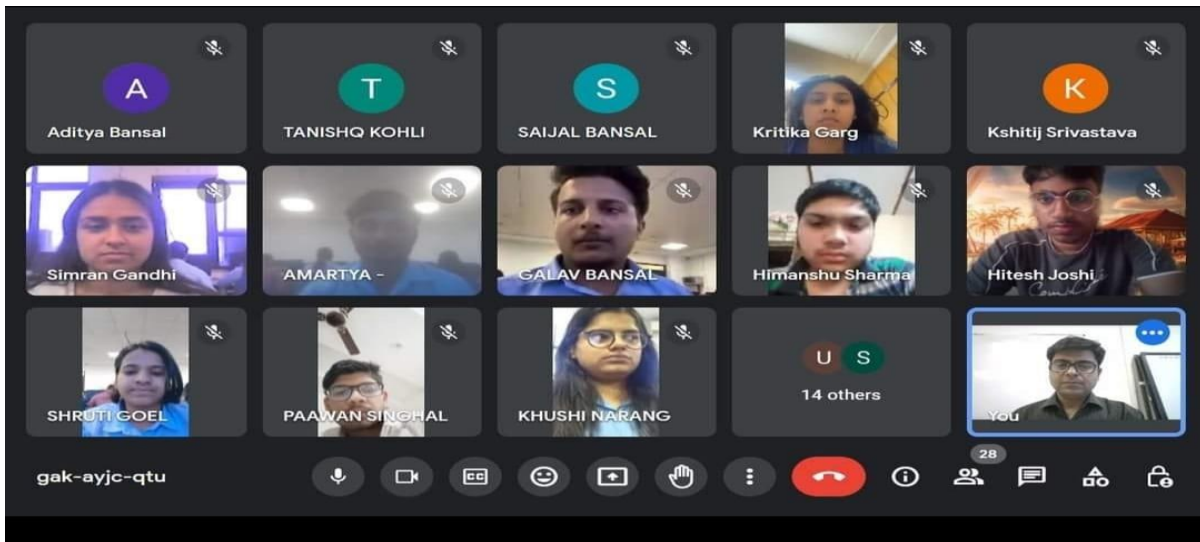
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DAY 4: 16/05/2023



DAY 5: 17/0/2023

**Prof. (Dr.) Manju Gupta**  
Head (Department of Commerce)

**Prof. (Dr.) Rajni MalhotraDhingra**  
Director, MAIMS