

Report

Certificate Course: Python for Data Science

Name of the Department: Department of Mathematics

Start Date: 24 September 2022

End Date: 12 November 2022

Duration of the Course: 40 Hours

Mode: Online (Google Meet and Google Classroom)

Resource Person: Mr. Nikhil Chauhan (Principal, Quantitative Analytics and Data Science, Gartner)

Dr. Anisha Khaitan (Junior Operational Research Scientist, Delhivery Ltd.)

Convenor/Coordinator: Dr. Sandeep Bhatt (Assistant Professor, Department of Mathematics)

Total Number of Registrations: 167

Total number of students who completed the course and got the certificate: 38 (36+2)

Brief Summary of the Event:

The Department of Mathematics organized a certificate course on “**Python for Data Science**” from 24 September 2022 till 12 November 2022. The inauguration session was held on 24 September with the inaugural speech by Mr. Basant Kumar Mishra, Senior faculty member and emphasized the relevance of the course in the current scenario. He discussed the different fields where it is used by the corporate and government sectors these days and cleared the thing that any graduate from any discipline can opt for and work in the said field. The Principal, Dr. (Prof.) R. K. Gupta sir, formally inaugurated the course, addressed the students, and enlightened the students about the future prospects of Data Science in different areas. Mr. Nikhil Chauhan had started the course with a brief introduction to the career opportunities in the field of Data Science. Throughout the session, Mr. Nikhil Chauhan and Dr. Anisha Khaitan explained both theoretical and practical aspects of Python. The hands-on session on Python with students made the session easy to understand. Weekly assignments and quizzes were shared with students to assess the learning and engage the students throughout the course. At the end of the course, Mr. Nikhil answered students' queries regarding pursuing higher education and jobs

in the area of data science. A total of 38 candidates (36 Students, 1 Faculty Member, 1 Project Fellow) successfully completed the course and were awarded certificates of completion.

Brochure:

<p>ABOUT THE COURSE</p> <p>PYTHON</p> <p>Python is an open-source, interpreted, high-level language and provides a great approach for object-oriented programming. It is one of the best languages used by data scientists for managing and analyzing data.</p>  <p>DATA SCIENCE</p> <p>Data science is an interdisciplinary field that uses scientific methods, processes, algorithms, and systems to extract knowledge and insights from structured and unstructured data and apply knowledge and actionable insights from data across a broad range of application domains. Data Science plays a heavy role in the areas of healthcare, logistics, entertainment, finance, and cyber security.</p> <p>PREREQUISITE</p> <p>No prerequisite. However, interest in Data Science is mandatory.</p>	 <p>ABOUT THE COLLEGE</p> <p>Ram Lal Anand College was founded in the year 1964 by the Late Shri Ram Lal Anand, who was a senior advocate in the Supreme Court of India. The college is located against the backdrop of Aravalli Range in the neighborhood of the south campus and can be reached from both sides of the ring road. It has a large campus, spread over ten acres of land with green lawns and an elegant building of architectural merit. The college offers 14 undergraduate courses for students of different streams (Humanities, Commerce, and Science) and one postgraduate degree program in Hindi. Most of the faculty members have Doctoral degrees and possess national and international postdoctoral research experience. The college has state of art infrastructure including 27 ICT-enabled classrooms, a Media Production Centre, Amphitheatre, Seminar Room, and Open Air Theatre.</p>	 <p>RAM LAL ANAND COLLEGE</p> <p>DBT Star College University of Delhi Benito Juarez Marg, South Campus New Delhi - 110021 https://rlacollege.edu.in</p> <p>PRESENTS</p> <p>A CERTIFICATE COURSE</p> <p>on</p> <p>PYTHON FOR DATA SCIENCE</p> <p>by</p> <p>DEPARTMENT OF MATHEMATICS</p>
<p>COURSE OUTCOME</p> <p>At the end of this course, students will be able to</p> <ul style="list-style-type: none"> • Perform basic Python Programming • Perform data handling using Python • Perform data aggregation using Python • Combine different data sets using Python • Handle missing values using Python • Create different plots using Python • Build a Linear regression model in Python <p>COURSE POTENTIAL</p> <p>The course has the potential to advance a career as:</p> <ul style="list-style-type: none"> • Data Analyst • Data Scientist • Business Analyst • Researcher • Data Engineer • Software Developer • Web Developer 	<p>RESOURCE PERSONS</p> <p>Mr. Nikhil Chauhan (Industry Expert) Specialization: Data Science</p> <p>Dr. Anisha Khaitan (Industry Expert) Specialization: Operational Research</p> <p>PATRON</p> <p>Prof. Rakesh Kumar Gupta Principal</p> <p>REGISTRATION DETAILS</p> <p>https://forms.gle/j7rCwKWZnDAR15NA Free for students of Ram Lal Anand College</p> <p>Register before 22 Sep, 2022</p> <p>For any queries contact: Mr. Sandeep Bhatt (+91 9873626870)</p>  <p>Scan Me</p>	<p>ORGANIZING TEAM</p> <p>Mr. Sandeep Bhatt (Convenor, Assistant Professor) Email: mathematics@rla.du.ac.in</p> <p>Mr. Basant Kumar Mishra (Assistant Professor)</p> <p>Mr. Kapil Kumar (Assistant Professor)</p> <p>Dr. Pooja Bansal (TIC, Assistant Professor)</p> <p>COURSE DURATION</p> <p>Start Date: 24 Sep, 2022 End Date: 12 Nov, 2022 Platform: Google Meet Duration: 40 Hrs (Weekends only) Time: 10:00 A.M. - 01:00 P.M.* (*Last day, 10:00 A.M. - 02:00 P.M.)</p> <p>ASSESSMENT CRITERIA</p> <p>Students who fulfill the following criteria will be eligible for the certificate:</p> <ul style="list-style-type: none"> • Minimum attendance- 70% • A combined score of at least 60% in quizzes, assignments/projects.

Schedule:



Ram Lal Anand College
DBT Star College
University of Delhi



Certificate course on “Python for Data Science”

Duration: 24 Sep, 2022 - 12 Nov, 2022

Time: 10:00 A.M. - 01:00 P.M.

Schedule

Day	Topics
Day-1	Introduction to Python, Software download, First program
Day-2	Basics of Jupyter notebook, Creating variables, Data types
Quiz-1	
Day-3	Boolean (And, Or, Not), Conditional execution
Day-4	While loop, For loop, Break, and continue
Quiz-2	
Day-5	Function, List, Tuples
Day-6	String, Dictionary
Quiz-3	
Day-7	Numpy
Day-8	Introduction to Pandas, Head, Tail, Shape, Column filters, Row filters
Assignment/Project-1	
Day-9	Handling null values, Sorting, Aggregation
Day-10	Group by, Joins
Quiz-4	
Day-11	Data visualization using seaborn
Day-12	Linear regression theory
Quiz-5	
Day-13*	An automation exercise and Linear regression practical
Assignment/Project-2	

***Note:** On Day-13, lecture will be of 4hr duration (10:00 A.M.-02:00 P.M.).

List of Total Registration: 167

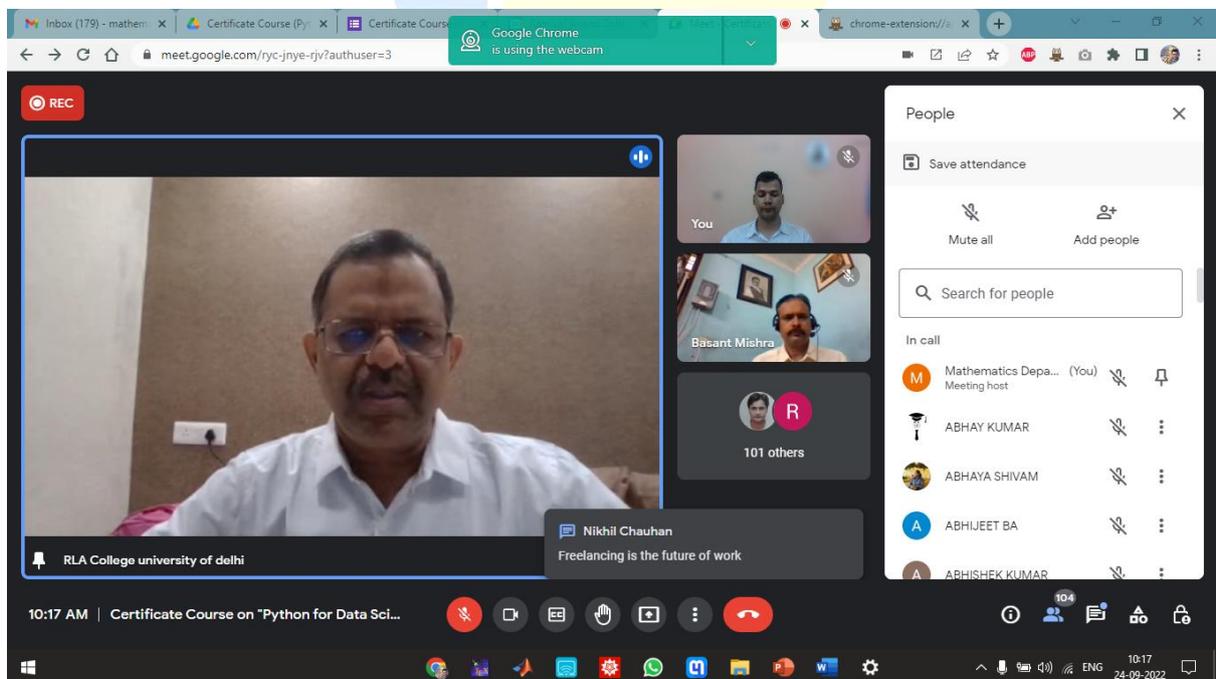
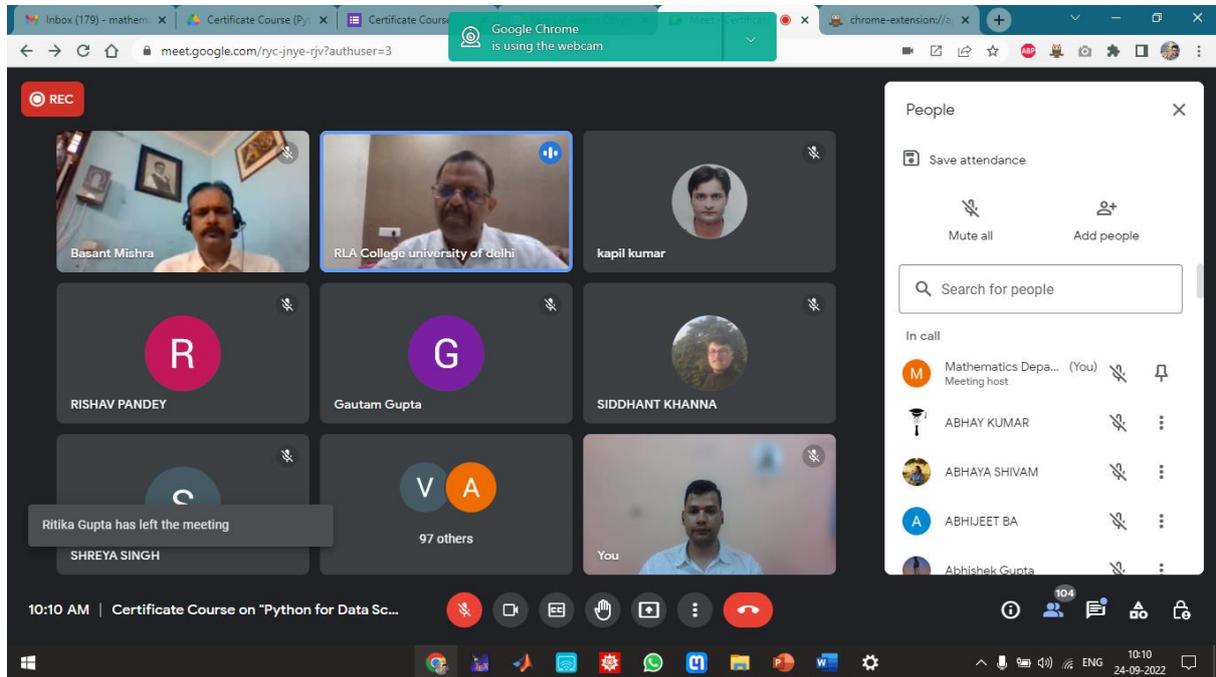
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List of Candidates who received the certificate:

Certificate Course in "Python for Data Science"

S.N.	Full Name	Course	Year	Roll No.
1	Aditya Gupta	B. Com. (H)	2	3588
2	Pragya Parul	B. Com. (H)	2	3601
3	Snehil Shivam	B. Com. (H)	3	3620
4	Ritika Gupta	B. Com. (P)	2	21058503050
5	Anurag Saini	B. Com. (P)	3	3069
6	Harshjot Kaur	B. Sc. (H) Statistics	2	5065
7	Khushi	B. Sc. (H) Statistics	2	5051
8	Radhika Garg	B. Sc. (H) Statistics	2	5066
9	Tanushree Yajnik	B. Sc. (H) Statistics	2	5053
10	Vanshika Jain	B. Sc. (H) Statistics	2	5064
11	Kartikey Parashar	B. Sc. (H) Statistics	3	5048
12	Shashank	B. Sc. (H) Statistics	3	5059
13	Vaibhaw Nath	B. Sc. (H) Statistics	3	5040
14	Yukti Kalra	B. Sc. (H) Statistics	3	5003
15	Shruti Kansal	B.A. (H) English	2	579
16	Dushyant Vats	B.A. (H) History	3	1520
17	Siddhant Khanna	B.A. (P)	3	15
18	Gautam Gupta	B.Sc. (H) Computer Science	2	4113
19	Archana	B.Sc. (H) Computer Science	3	4077
20	Ashok Kumar	B.Sc. (H) Computer Science	3	4081
21	Shwet Kumar	B.Sc. (H) Computer Science	3	4015
22	Vansh Jindal	B.Sc. (H) Geology	2	5510
23	Apoorvi Jain	B.Sc. (H) Geology	3	5502
24	Sunny	B.Sc. (H) Geology	3	5540
25	Brijesh Kishore Mishra	B.Sc. (H) Mathematics	2	6294
26	Khushboo Jain	B.Sc. (H) Mathematics	2	6244
27	Mansi	B.Sc. (H) Mathematics	2	6295
28	Mohd Riyaz	B.Sc. (H) Mathematics	2	6206
29	Shivani Meena	B.Sc. (H) Mathematics	2	6253
30	Simran	B.Sc. (H) Mathematics	2	6239
31	Divya Gupta	B.Sc. (H) Mathematics	3	6268
32	Rohan Aswal	B.Sc. (H) Mathematics	3	6259
33	Vivek Kumar	B.Sc. (H) Mathematics	3	6291
34	Arman	BMS	3	6547
35	Sandeep Yadav	BMS	3	6564
36	Vandana Verma	BMS	3	6556
37	Jaya Rai	Fellow, NHMS Project		
38	Prem Kumar	Faculty (Geology)		

Glimpse of the sessions:



meet.google.com/ryc-jnye-rjv?authuser=3

REC

Nikhil Chauhan

10:27 AM | Certificate Course on "Python for Data Sci..."

People

- Save attendance
- All muted
- Add people
- Mathematics Depa... (You) Meeting host
- AARTI KAPOOR
- ABHAY KUMAR
- ABHAYA SHIVAM
- Abhishek Gupta
- ABHISHEK HANSADA

kapil kumar

RLA College university of ...

108 others

You



meet.google.com/ryc-jnye-rjv?authuser=3

REC

Nikhil Chauhan is presenting

12:44 PM | Certificate Course on "Python for Data Sci..."

In-call messages

Let everyone send messages

Messages are being recorded with the call

RISHAV PANDEY 12:33 PM
Yes

RAHUL RANJAN 12:33 PM
Wanda vision fan

DEVENDER KUMAR 12:33 PM
waiting for the Wakanda Forever

SIDDHANT KHANNA 12:34 PM
Sir that is on my list -she hulk

Send a message to everyone. Messages are also recorded.

Class 1 Last Checkpoint: 2 minutes ago (unsaved changes)

```

File Edit View Insert Cell Kernel Widgets Help Python 3 (ipykernel)
In [2]: print("hello world")
hello world
In [3]: x = 5
In [4]: y = 10
In [5]: print(x + y)
NameError: name 'x' is not defined
Traceback (most recent call last):
  ~\AppData\Local\Temp\ipykernel_16596/3598954175.py in <module>
----> 1 print(x + y)
NameError: name 'x' is not defined

```

109 others

You

Nikhil Chauhan

meet.google.com/rnc-jnye-rjv?authuser=3

REC Anisha Khaitan is presenting

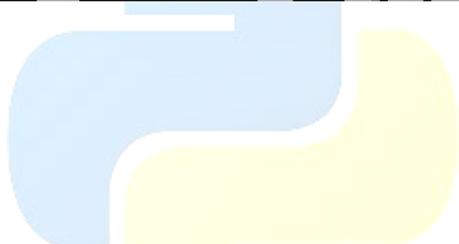
Problem Solving Skills

The single most important skill for a Data Scientist is problem solving.

Problem solving means the ability to formulate problems, think creatively about solutions, and express a solution clearly and accurately.

As it turns out, the process of learning to program is an excellent opportunity to practice problem solving skills

10:19 AM | Certificate Course on "Python for Data Sci..."



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REC Anisha Khaitan is presenting

$1 + 2 + 3 + \dots + 10$

```

count = 0
while count < 10:
    count = count + 1
    print(count)

```

```

count = 1
sum_c = 0
while count <= 10:
    sum_c = sum_c + count
    count = count + 1
    print(sum_c)

```

count	sum_c	while	sum_c (incremented)	count (incremented)
1	0	T	1	2
2	1	T	3	3
3	3	T	6	4
4	6	T	10	5

10:47 AM | Certificate Course on "Python for Dat..."

Python for Data Science 24 Sep, 2022 - 12 Nov, 2022

Stream Classwork People Grades



Meet
 Generate link

Class code
 r1lf32m

Upcoming
 No work due soon

Announce something to your class

Mathematics Department posted a new assignment: Main Assignment-2
 Nov 12 (Edited Nov 19)
 20 class comments

Nikhil Chauhan posted a new material: Class- 13 Material
 Nov 12

19°C Smoke

ENG IN 07:18 AM 03-12-2022



Classwork for Python for Data Science

Stream Classwork People Grades

+ Create Google Calendar Class Drive folder

All topics

Class Material

Assignment/Project

Quiz

Online Python Compiler
 Posted Sep 24

Python Software (Anaconda)
 Posted Sep 24

Class Material

Class-1 Material
 Edited Sep 25

Class-2 Material
 Edited Sep 25

Class-3 Material
 Posted Oct 1

Class-4 Material
 Edited Oct 2

Class-5 Material
 Edited Oct 15

19°C Smoke

ENG IN 07:19 AM 03-12-2022

Feedback from the students:

Criteria	Average Rating (1-5)
The course as a whole was	4.3
The course content was	4.3
The instructor's effectiveness in teaching the subject matter was	4.2
Explanations by the instructor were	4.4
The instructor's use of examples and illustrations was	4.4
The quality of questions or problems raised by the instructor was	4.2
The relevance of course content was	4.4
The clarity of instructor's voice and the video feed was	4.4

Some Comments from Students: (What would you like to say about this course to a student who is considering taking it in the future?)

- It is an excellent course and you will get to learn many new concepts through this course. You will develop good analytical as well as coding skills if you follow along with the instructor and stay consistent.
- Tanushree Yajnik (B.Sc.(H) Statistics)
- I'll highly recommend the student to take up this course since it polished my basic knowledge along with my further skill enhancement.
- Khushboo Jain (B.Sc.(H) Mathematics)
- Polished my Basic knowledge of Python and improved my advanced knowledge of pandas.
- Siddhant Khanna (B.A.(P))
- I would like to say that if a student has an interest in the field of Data Science, then he or she must take this course.
- Anurag Saini (B.Com.(P))