



# **Ministry of Education**

**( Formerly Ministry of Human Resource Development )**

**PANDIT MADAN MOHAN MALVIYA  
NATIONAL MISSION ON TEACHERS AND TEACHING  
(PMMMNTT)**

**ONE WEEK ONLINE FACULTY DEVELOPMENT PROGRAM  
ON  
INTRODUCTION TO MACHINE LEARNING IN RESEARCH  
(CONCEPTS AND PRACTICAL USE)**

**10<sup>th</sup> October - 18<sup>th</sup> October , 2020**

**3:00 P.M. to 6:00 P.M.**

**Organized By**

**DEPARTMENT OF COMPUTER SCIENCE  
RAM LAL ANAND COLLEGE  
(University of Delhi)**

**in collaboration with**

**TEACHING LEARNING CENTRE  
RAMANUJAN COLLEGE  
(University of Delhi)**



## **RAM LAL ANAND COLLEGE**

**Ram Lal Anand College was founded in the year 1964 by Late Shri Ram Lal Anand, a senior advocate in the Supreme Court of India, in response to the growing social demand in the sixties for providing educational opportunities at the university level. The college was initially managed by the Ram Lal Anand College Trust. It was later taken over by the University of Delhi. Since 1973, it has been run by the University of Delhi as a University Maintained Institution.**

**The college is located in the picturesque surroundings against the backdrop of the Aravali ranges in the neighborhood of the South Campus of the University of Delhi and several other educational institutions. It has a vast campus, spread over ten acres of land with green lawns and elegant buildings of much sprawling architectural merit. The college has excellent infrastructure, with state of the art Laboratories, Seminar room, Amphitheatre, Library, Playground and Cafeteria. The campus is Wi-Fi enabled. Being a multi-disciplinary, co-educational institution it has approximately 1500 students pursuing different courses in Arts, Commerce and Science streams. Ram Lal Anand College is administered by a statutory Governing Body as per the University Ordinances and legislated by the Executive Council of the University of Delhi.**

**The college boasts off a highly learned and committed teaching faculty of about 80 teachers. Apart from their traditional role of disseminating knowledge, the teachers inspire and guide the students to manage different activities such as seminars, workshops, debates, theatre, cultural activities including classical music and dance programmes. Teachers are also involved in guiding students in various research and innovation projects. RLA with its wide expanse of fields and a technical support provides conducive environment for sports. The College is proud to be one of the leading affiliates of the National Cadets Corps (NCC) and National Services Scheme (NSS) with an impressive member of cadets / volunteers enrolled each academic year. welcome to RLA and experience the joys of learning !**



## **RAMANUJAN COLLEGE**

**Ramanujan College, University of Delhi, is located in the well-known area of Kalkaji, near Nehru Place in South Delhi. Ramanujan College has highly qualified, dedicated and committed faculty members. The college runs fifteen courses in different subjects in Humanities, Commerce and Science streams. It is also the study centre for the students of the School of Open Learning, University of Delhi, the Non- Collegiate Women's Education Board, University of Delhi and the Indira Gandhi National Open University. Ramanujan College has also been selected by the MHRD as a National Resource Centre.**

**The College also runs a number of professional courses. The teachers of Ramanujan College are highly motivated and have original, published academic and creative work, including journal and other print media articles and educational film making to their credit. Ramanujan College is a premier institution of the University of Delhi and has been accredited grade "A" by the National Assessment and Accreditation Council (NAAC). The college has also been ranked 26th in the National Institute Ranking Framework (NIRF 2018). We at Ramanujan College emphasize on the holistic development of personality, meaningful exposure to real world, and inculcating practical skills amongst our students apart from ensuring academic excellence.**

## **PMMMNMTT**

**The Ministry of Human Resource Development (MHRD) launched the Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNMTT) in 2017. One of the main objectives of this mission is to facilitate teacher training by constituting Teaching Learning Centers in various institutions of higher education in our country. The Teaching Learning Centers (TLCs) are mandated to promote on a continuous basis the learning of new pedagogical practices, methodology of forming discipline-specific curricula and creating new learning materials (including e-content) for use by the teachers in colleges and postgraduate departments. It is envisioned that the TLCs will accelerate the teaching-learning process by encouraging independent critical and creative thinking and facilitating research for subject-specific growth.**

**The TLCs will assist the faculty in capacity building for curriculum designing, scientific assessment and evaluation and the development of innovative academic programs to strengthen the inclusive nature of higher education. The TLCs are also encouraged to reach out to teachers teaching in regionally disadvantaged locations.**

**The Pandit Madan Mohan Malviya National Mission emphasizes the need to change the role and workings of a teacher from a mere disseminator of information and knowledge to the one who helps students to develop critical, analytical skills, capabilities to generate information, the ability to reason and to empower themselves through open sources and globally oriented digitalized self-learning processes. The focus is not only on 'what is taught' but also importantly, to 'the way it is taught,' in an effort to develop and enhance individual education, that will eventually go on to define the manner in which the future generations will work and live.**

**The Teaching Learning Centers offer Faculty Induction Programs (FIPs) for newly recruited faculty and Faculty Development Programs (FDPs) for teachers with experience who wish to update their field of knowledge, expertise and skill with the latest available research, resources and technology. In the FDPs, special emphasis is given to inter and crossdisciplinary methodologies of study.**

**Currently, the teaching fraternity is missing their lively and interactive classrooms due to COVID-19 Pandemic. To address the present situation, the University Grants Commission (UGC) has intensified its efforts to have a strong virtual engagement with the students through email/WhatsApp and hosting lectures using Google Class Room and other video-conferencing platforms.**

## Objectives

- 1: Understanding of the underlying concepts of Machine Learning.
- 2: To appreciate use of Machine Learning in different domains in research / real life.
- 3: Learning basic practical skills to apply simple machine learning tools.
- 4: Learn good practices in Machine Learning to make application of Machine Learning really beneficial in each domain.

## Program Schedule

Day	Topics to be Covered
1	<b>Theory:</b> Introduction to Linear Algebra, Machine Learning and its use in research, Overview of Machine Learning, Utility, classification of ML systems, example of applications <b>Practical:</b> Introduction to Jupyter Notebook and Google Colab
2	<b>Theory:</b> Supervised vs. Unsupervised Learning , Linear Regression with one variable (and any associated topic). <b>Practical:</b> Introduction to Python, NumPy and Pandas
3	<b>Theory:</b> Gradient Descent <b>Practical:</b> Data visualization, Data pre-processing (handling missing data, data cleaning, transformation), Implementation of Gradient Descent
4	Good Practices in Machine Learning (Special Session)
5	Participants will be given time to prepare assignment
6	<b>Theory :</b> Linear Regression with multiple variables <b>Practical :</b> few examples of Linear Regression using Python
7	<b>Theory:</b> Logistic Regression <b>Practical:</b> few examples of Logistic Regression using Python

## ELIGIBILITY

- The FDP is open to Faculty members (regular/ ad-hoc/ temporary) and Research Scholars from any Indian university/ college.

All the participants are requested to register online by visiting <https://rlacollege.edu.in/> on or before October 9, 2020 by browsing the link given in registration details below.

- Registration for all the participants is mandatory. For further queries, please mail us at: [rlacsfdp@rla.du.ac.in](mailto:rlacsfdp@rla.du.ac.in)

## REGISTRATION DETAILS

Fees for the programme : INR 500/- (NonRefundable) \*

- Payment can be done through Debit card/ Credit card/ Online net banking to the link mentioned below.

### Payment Link :

<https://www.payumoney.com/customer/users/paymentOptions/#/02E9CA38594D6B112AB025A62AF167A9/ramlalanandcollege/203839>

### Registration link :

<https://forms.gle/75qKQpVRK8B37P2bA>

## PROCESS

1: Participants will fill up the online application form given in the registration link above with all required details & payment option within the registration form before the final date of submission. Late applications will not be entertained. The final date of submission is October 9, 2020.

2: After successful registration & payment, the participants will receive a final confirmation and invitation letter on or before October 9, 2020.

## FDP RULES

- The FDP begins on October 10, 2020. Details of programme will be sent to the participants' later on their telegram link or on their email-id mentioned in the registration form.
- As the FDP is being organized under the prestigious PMMMNMTT scheme of MHRD, we at Ram Lal Anand College with TLC, Ramanujan College give prime importance to willing and serious participants who are eager to learn. Therefore, it is compulsory for participants to attend all the online sessions in order to receive certificate of participation.
- Certificate criteria is to attempt and submit 90% of all online quizzes and one assignment as per the date mentioned for each quiz and assignment.
- Feedback form will be shared on daily basis and all participants have to send online feedback for each session.

**RAM LAL ANAND COLLEGE  
(University of Delhi)**

**CHIEF PATRON**

Dr. Rakesh Kumar Gupta  
Principal

**FDP Coordinator**

Dr. Neeraj Kumar Sharma  
Assistant Professor  
Dept. of Computer Science

**Organizing Committee**

- Dr. Vandana Gandotra  
Associate Professor, Department  
of Computer Science
- Ms. Sakshi Taresh Khanna  
Assistant Professor,  
Department of Computer Science
- Ms. Shikha Verma  
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**RAMANUJAN COLLEGE  
(University of Delhi)**

**CHIEF PATRON**

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Principal

**FDP Coordinator**

Ms. Nidhi Mathur  
Senior Assistant  
Dept. of Vocation (B. Voc.)

**Assistant Directors**

- Dr. Sumit Nagpal, Assistant  
Professor,  
Department of Mathematics
- Dr. Nikhil Rajput,  
Assistant Professor,  
Department of Computer  
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