



# ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP) on Application of Artificial Intelligence & Machine Learning in Bioinformatics

(15<sup>th</sup> March – 25<sup>th</sup> March 2022) (03 - 07 PM)

Organized by  
**Department of Biotechnology**  
in association with  
**Electronics & ICT Academy, NIT Warangal**

## Preamble:

"Electronics & ICT Academy" was set up at NIT Warangal with financial assistance from MeitY, GoI. The jurisdiction of this academy is Telangana, Andhra Pradesh, Karnataka, Goa, Puducherry and Andaman & Nicobar Islands. This academy's role is to offer Faculty Development Programmes in standardized courses and emerging areas of Electronics, Information Communication Technologies, training & consultancy services for Industry, curriculum development for Industry, CEP for working professionals, Advice and support for technical incubation and entrepreneurial activities.

## About the FDP:

The Faculty Development Programme will help to disseminate the knowledge in the domain of AI and Machine learning with python for Biomedical Applications. It empowers the participants to understand how AI can be used to innovate and improve the Medical related applications. Machine Learning is a fast-growing field of Artificial Intelligence concerned with the study and design of computer algorithms for learning good representations of data, at multiple levels of abstraction. Since data is overwhelming, organizations are struggling to extract the powerful insights they need to make smarter business decisions. The participants will be trained with hands-on approach in order to have an in-depth insight into the domain of AI & ML and expose them to Feasibility & future scope

## Major Course Contents:

- ❖ Introduction to Artificial Intelligence, Machine Learning, Data Science
- ❖ Research in Machine Learning and Applications
- ❖ Machine Learning with Feature Representation
- ❖ Feature Selection and Ensemble Methods
- ❖ Machine Learning Basics – Linear Regression
- ❖ Perceptron's, Multilayer Perceptron's
- ❖ KNN, Unsupervised Learning Methods, K-Means
- ❖ Dimensionality Reduction Methods, PCA
- ❖ Support Vector Machine
- ❖ Artificial Intelligence in Bioinformatics
- ❖ Biological Image and data analysis
- ❖ Learning rules for biological data
- ❖ Clustering and Microarray analysis

## Faculty conducting this programme:

The programme will be conducted in online mode by the faculty members from NIT Warangal; Academicians in the concerned field from IITs/NITs/IITs are invited to deliver lectures in the programme. Speakers from industries are also expected to deliver lectures as part of the course.

## How to apply:

Participants are required to fill in the online registration form given in the <https://forms.gle/hU8MpioVPchcyGWL7>

## Selection Criteria:

Selection will be done based on first-come-first-serve basis to a maximum number of 100. The list of selected participants will be intimated through e-mail. In case a candidate is not selected, the DD will be sent back. Candidates will be issued satisfactory certificates on successful completion of the course. Reservations are followed for selecting candidates as per GOI norms.

## Registration Fee Particulars:

Faculty and Research Scholars	Rs.500/-
Industry Participants	Rs.1500/-

Participants need to pay the Registration Fee Online using the following details.

Online Transfer Details	
Account Name	: <b>Electronics &amp; ICT Academy NITW</b>
Account No	: <b>62423775910</b>
IFSC	: <b>SBIN0020149</b>
Bank and Branch	: <b>State Bank of India, NIT (REC) Warangal</b>

## Important Dates:

Last date (Application & DD)	<b>12.03.2022</b>
Selection List by E- mail	<b>13.03.2022</b>
Duration	<b>15.03.2022 to 25.03.2022</b>

## About NIT Warangal:

National Institute of Technology, Warangal is the first among 17 RECs setup as joint venture of the Government of India and the state government. Over the years the college has established itself as a premier Institute imparting technical education of a very high standard leading to the B.Tech degrees in various branches of engineering, M.Tech. and Ph.D. programmes in various specializations. All B.Tech and M.Tech programmes of NIT Warangal are NBA accredited.

## About Department:

Biotechnology and Bioinformatics have the ability to combine biological sciences and innovative technologies to create or evolve novel processes or novel products beneficial for human welfare. Until few years ago academicians trained in traditional disciplines of biological sciences were specializing in biotechnology and thus meeting the demands of both academia and industry. However, tremendous advancements in biology over the past half century- from Watson and Crick's elucidation of the structure of DNA to today's astonishing, rapid progress in the field of synthetic biology- the design, engineering, construction and production of synthetic cell factories, a need has been felt that educational programmes be launched to educate and train youth in biotechnology and bioinformatics.

The Department of Biotechnology offers B. Tech and M.Tech courses in Biotechnology, PhD program in various disciplines of Biotechnology. The Department has experienced faculty with good publications and well-established laboratories. The Department has liaison with reputed research organizations in India and Overseas. Department conducts various sponsored programmes throughout the year.



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1. Name:
2. Designation:
3. Institution:
4. Email:
5. Mobile No:
- 6.

Reference No:
Amount:
Bank :
Date:

7. Address for Correspondence:
8. Educational Qualification:
9. Subjects taught so far:
10. No. of refresher courses/workshops attended:
11. Experience (in years):  
Teaching:            Research:            Industry:
12. Do you belong to SC/ST: YES /NO  
(If yes, please specify and attach a copy of caste certificate to claim the concession)

**Declaration:**

The information provided is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the FDP and shall attend the course for the entire duration. I also undertake the responsibility to inform the Coordinator in case, I am unable to attend the course.

Date

Signature of the Applicant

## SPONSORSHIP CERTIFICATE

Dr. /Mr. /Ms. .... is an employee of our Institute/Organization and is hereby sponsored to participate in the FDP on “**Application of Artificial Intelligence & Machine Learning in Bioinformatics**”, sponsored by **Electronics & ICT Academy** during **15<sup>th</sup> March – 25<sup>th</sup> March, 2022** at NIT Warangal, Telangana.

Signature of Head of Institution  
(With seal)

## Address for Correspondence:

Post your application form:

### **Dr.Perugu Shyam**

Assistant Professor  
Department of Biotechnology  
National Institute of Technology Warangal  
Hanamkonda, Telangana, PIN: 506004

For more details about **Electronics & ICT Academy, NIT Warangal**, please visit: <https://nitw.ac.in/eict>

Interested Faculty are required to fill in the online registration form given in the

<https://forms.gle/hU8MpioVPchcyGWL7>

## For more enquiries please contact:

Dr. Perugu Shyam  
Ph. No: 9948561761  
Email: [workshopatnitw@gmail.com](mailto:workshopatnitw@gmail.com)

## Coordinators

### **Dr. Perugu Shyam**

Assistant Professor,  
Department of Biotechnology,  
National Institute of Technology Warangal,  
Warangal – 506 004 (Telangana State).  
Email: [workshopatnitw@gmail.com](mailto:workshopatnitw@gmail.com)  
Ph. No: 9948561761