



Science and Engineering Research Board (SERB)

VRITIKA PROGRAM

ACCELERATE VIGYAN SCHEME

Training and Skill Internship on

**Fast track training cum internship on artificial & machine learning intelligence
(FTTCIAMLI-2022)**

November 01—28, 2022

Organized by

Department of Mathematics

Indira Gandhi National Tribal University, Amarkantak, Madhya Pradesh, India

<http://www.igntu.ac.in/>

VRITIKA

'VRITIKA' is the call for initiation and practice in science through Training and Skill Internship. This program aims to provide opportunities to promising Postgraduate (PG) students from universities and colleges to get exposure and hands-on research skill development experience. These internships will primarily be facilitated by organizations / institutions / laboratories of national importance such as IITs, IISc, IISERs, NITs, CSIR, ICAR, ICMR etc. This Internship program also offers the PG students a chance to interact with the researchers at Indira Gandhi National Tribal University, Amarkantak for their future research endeavours.

Who can Register

Post graduate students of Science and Engineering Stream (Ongoing/Pursuing)

Number of Positions Available

Five (05)

Duration

01 November – 28 November, 2022 (4 weeks)

Last date for application

25th October 2022

CONTACT:

डॉ. राघव प्रसाद परौहा Dr. Raghav Prasad Parouha

कार्यक्रम आयोजक Event Organizer (EO)

इंदिरा गांधी राष्ट्रीय जनजातीय विश्वविद्यालय, अमरकंटक (म.प्र.), भारत

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<https://scholar.google.co.in/citations?user=talhHfQAAAAJ&hl=en>



Indira Gandhi National Tribal University, Amarkantak, Madhya Pradesh, India <http://www.igntu.ac.in/>





ABOUT INDIRA GANDHI NATIONAL TRIBAL UNIVERSITY (IGTU)

Indira Gandhi National Tribal University, Amarkantak has been established by an Act of the Parliament of India the Act, 2007, and started functioning in July 2008. The jurisdiction of the University extends to the entire country and it is fully funded by the Government of India. The University is located in the tribal dominated areas of Central India, and it has been catering educational and research needs of the deprived sections of society for the last 14 years. Faculty in the University is from 26 different States of India. In view of the aims and objectives of the university the major thrust will be on providing more opportunity for the tribes. However, the university is open to all.

HOW TO REACH

The university campus is situated 30 kms in west of Pendra Road Railway Station (Chhattisgarh) on the Katni-Bilaspur track of South West Central Railway. Almost all the trains plying on this track stop here. It can be reached by bus from all directions as there are good connectivity of buses from Jabalpur, Raipur, Bilaspur, and Allahabad, Rewa, Shahdol, Dindori and Anuppur routes. Amarkantak can be approached by air through Jabalpur (M.P.) in the West and Raipur (Chhattisgarh) in the East.

OBJECTIVE & SCOPE OF THIS INTERNSHIP PROGRAM

To groom students (primarily from Universities, Colleges, Private Academic Institutions, and newly established Institutes) in their career pursuits by developing dedicated research skills in selected disciplines of Science and Engineering through Training and Skill Internship. The Key objectives of training cum internship on Artificial Intelligence (AI) & Machine Learning (ML) intelligence are given as follows.

- ☞ To explore the opportunities and challenges in the area of AI & ML to offer insights into exciting advancements in technology.
- ☞ To learn real world implementation of AI & ML how they have changed our lives.
- ☞ To give Hands-on learning experience on project based working model.
- ☞ To provide intense knowledge on AI & ML with required programming knowledge so that an individual is capable to develop any real-time project by themselves.
- ☞ To provide a platform where students to start their career on AI & ML i.e. gain real time experience on their career development.

Moreover, following topics to be covered in this Training cum internship on AI & ML

- ☞ **Module-1:** Basics of Artificial Intelligence
- ☞ **Module-2:** Introduction of Machine Learning.
- ☞ **Module-3:** Basics of AI algorithms especially Metaheuristic algorithms (evolution-based algorithms, swarm intelligence algorithms, physics-based algorithms, and human behavior-based algorithms)
- ☞ **Module-4:** Fundamentals of machine learning algorithms and their performance
- ☞ **Module-5:** Introduction to MATLAB/Python Programming
- ☞ **Module-6:** How to use MATLAB/Python Libraries for AI and ML based techniques
- ☞ **Module-7:** Real-time application of AI and ML based techniques

These modules are mix of theory, quizzes, hands-on/ practical exercises, assignments and projects. Maximum Impetus is given to hands-on exercises, assignments and projects so as to enable the intern with the maximum knowledge transfer and satisfaction. **The ratio of the theory and practical sessions will be 30:70.** Also, idea and discussion over SERB-DST project writing and submission, and technical paper writing are the part of the modules.





HOW TO APPLY?

- ☞ The applicant has to e-mail the scanned copy of duly filled-in application form alongwith all required documents and certificates mentioned below (PDF only) to the e-mail ID: rparouha@igntu.ac.in before **25th October, 2022, 23:59:59** (Time).
 - ✓ Filled & Signed Application Form (Annexure -I)
 - ✓ Endorsement cum No Objection Certificate duly approved by Head of Department (Annexure -II)
 - ✓ Signed Undertaking Form (Annexure -III)
 - ✓ P.G. Semester Marksheets (Self Attested)
 - ✓ U.G. Final Semester/year Marksheets/Degree Certificate (Self Attested)
 - ✓ Institution/College/University I.D. Card (Scanned Copy)
- ☞ Send the scanned copy of filled-in Application form with required documents as a single PDF file with the **Subject** line having **Application_Vritika_Candidate Name_Institution Name**.
- ☞ Application sent after due date (**25th October, 2022**), incompletely filled application, application without signature, application without required attachment/document, application without proper clarity will **NOT** be considered.

SELECTION CRITERIA

- ☞ The screening will be primarily based on the details provided in the application form.
- ☞ Shortlisted applicants will be intimated electronically.

PROVISIONS IN TRAINING AND SKILL INTERNSHIP

- ☞ The internship will be given for meeting daily necessary expenses such as stationery, consumables and food, etc.
- ☞ For outstation candidates, one time onward and return train ticket cost (Shortest route to IGNTU, Amarkantak/ Pendra Road Railway Station in 2S/Sleeper class) will be reimbursed (as per GoI norms).
- ☞ Certificate will be provided on successful completion of this Training and Skill Internship.
- ☞ Selected candidates shall attend the program physically. Attendance (100%) is mandatory.
- ☞ The interns should follow the host institute rules and regulations strictly.
- ☞ Accommodation shall be provided depending on the availability of rooms in the University Hostels/guest house.
- ☞ Interns will complete the assigned tasks and assignments timely.
- ☞ Submission of individual final report at the end of the tenure is mandatory.
- ☞ The IP rights of the research work shall be reserved by the institute which cannot be used by the intern without prior permission from the Event Organizer/Supervisor.
- ☞ It would be appreciable if candidates bring their own laptops.
- ☞ The financial assistance for conducting this event has been provided by the **Science & Engineering Research Board**, a statutory body of the **Department of Science & Technology (DST), Government of India**.

DOCUMENT SUBMISSION DURING THE PROGRAM

- ☞ The selected students should submit original hard copy of the application form with relevant documents (emailed as soft copy while applying for this event).
- ☞ The student should also submit Self Declaration form - COVID 19 as per Government of India guidelines at the time of joining.
- ☞ At the end of the program, the student has to submit a Training and Skill Internship report.

CAUTION/NOTE

- ☞ **NO** benefit/certificate would be provided for the student dropping/leaving/partially attending the Training and Skill Internship.
- ☞ **NO STIPEND** for this Training and Skill Internship.





Annexure - I

Application Form

1.	Full Name of the Applicant (Full name as described on certificate)				Recent Photograph
2.	Father's/ Mother's/ Guardian's name				
3.	Date of birth (DD/MM/YY)				
4.	Gender	Male/Female			
5.	Nationality	Indian/_____			
6.	Email Address				
7.	Correspondence Address				
8.	Permanent Address				
9.	Contact Number				
10.	P.G. Degree Pursuing	M.Sc./M.Tech./M.E./Others_____			
11.	P.G. Degree Specialization Subject				
12.	Name of the Institution/University/College(P.G. Degree)				
13.	Division/Department/School(P.G. Degree)				
14.	CPI/CGPA/Percentage obtained in P.G. Degree (Fill whichever applicable) *Attach self-attested photocopy of all available marksheets	Semester 1	Semester 2	Semester 3	
15.	U.G. Degree Completed	B.Sc. / B.Tech. / B.E. / Others _____			
16.	U.G. Degree Specialization Subject	B.Sc. / B.Tech. / B.E. / Others _____			
17.	Name of the Institution/University/College (U.G. Degree)				
18.	CPI/CGPA/Percentage obtained in U.G. Degree *Attach a proof for CPI/CGPA/%obtained in UG Degree				
19.	Emergency Contact Person				
20.	Emergency Contact Person's Mobile Number				

I agree that all the information mentioned are correct and I shall be liable for the same.

Place:

Date:

Signature of the Applicant





Annexure – II

Endorsement cum No Objection Certificate from the Head of the Department/ Institute

(To be given on University/ Institute/ College Letterhead)

This is to certify that:

1. Mr. / Ms. / Mrs. _____, is a bonafide student of our University / Institute / College and will assume full responsibility for actively participating in the Training and Skill Internship on **“Fast track training cum internship on artificial & machine learning intelligence (FTTCIAMLI-2022)”** sponsored by SERB under the **Accelerate Vigyan Scheme**, and organized by **Department of Mathematics, Indira Gandhi National Tribal University, Amarkantak, Madhya Pradesh, India, from 1st November to 28th November, 2022.**
2. The Applicant is a Full-time / part-time student of our University/ Institute/ College and enrolled in M.Sc. / M.Tech. / M.E. Programme in
Department.
3. The candidate has secured _____% / CGPA / CPI till date (if applicable).
4. The University/ Institute/ College also endorse the conduct of the applicant to be of highest order who bears a good moral character.
5. The University/ Institute/ College have “No-Objection” for the candidate participation during the above said period.
6. The candidate, if selected for participation, shall be duly permitted to attend the Training and Skill Internship on physical mode. The University/ Institute/ College may provide the necessary facilitation needed for this purpose.

Date:

Place:

Signature and Seal with name
(Head of the Department/Institute)





Annexure - III

Undertaking from the Applicant

1. I hereby provide my consent to participate in the Training and Skill Internship titled “Fast track training cum internship on artificial & machine learning intelligence (FTTCIAMLI-2022)” organized Department of Mathematics, Indira Gandhi National Tribal University, Amarkantak, Madhya Pradesh, India, from November 1st to 28th November, 2022, upon selection.
2. Vouch for participating in this Training and Skill Internship whole-heartedly and attend all the lab sessions, sincerely with utmost dedication.
3. I shall also be responsible and attentive to involve myself during the discussion/interaction session.
4. I am aware that it is mandatory to attend all the lab sessions, compulsorily qualify the course assessment and submit report in order to successfully avail the certification.
5. I understand that the materials supplied during this Training and Skill Internship is only for educational/academic purpose.
6. Uploading/hosting/sharing any content on any platform shall be unlawful on the grounds of Intellectual Property Rights.
7. Any Proxy participation in the Training and Skill Internship shall invite immediate cancellation of his/her candidature and same shall be reported to parent institution.
8. I understand to ensure my physical presence and any support in this regard is to be sought from the applicant’s parent Institution. The organizing institute shall not be liable for the same.
9. I shall strictly follow the COVID guidelines issued by Government of India and State of Madhya Pradesh.
10. I agree to abide by any other terms and conditions of Organizing Institute and SERB.

Name of the Applicant:

Gender & Age:

Degree (M.Sc./M.E./M Tech/Others):

Institution/College/University:

Date:

Place:

Signature of the Applicant:

