



*About*

# NIELIT

# Ropar/Chandigarh

*Previously Regional Computer Centre(RCC)/ DOEACC*





# about NIELIT Ropar/Chandigarh

erstwhile



1978

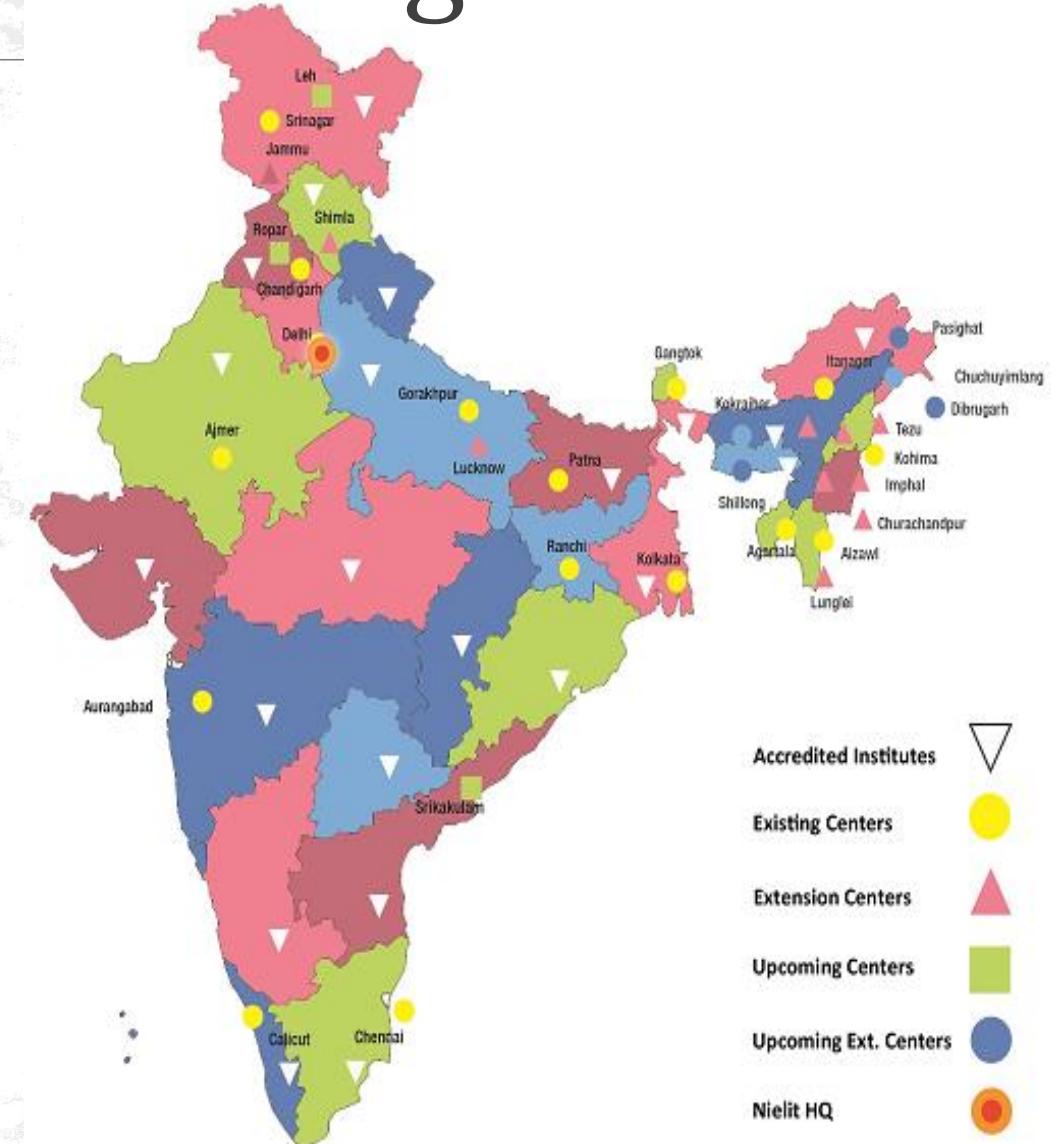
Regional Computer  
Center (RCC)



डी ओ ई ए सी सी  
2003  
DOEACC



2012 onwards





# About NIELIT

- NIELIT – National Institute of Electronics and Information Technology
  - is a Capacity Building arm of the Ministry of Electronics and Information Technology (MeitY), Government of India
  - offers courses in IECT in the Formal as well as the Non-Formal Sectors of Education
  - is playing a key role in Digital India, Make in India & Skill India initiatives undertaken by Govt. of India
- Pan India presence – 50+ NIELIT Centres
- Network of over 1100+ private accredited Centres and
- About 8500+ Facilitation Centres actively engaged in Digital Literacy.
- NIELIT – National Examination body
  - vast experience in conducting Online examinations and third party assessments.



# NIELIT Chandigarh



## Our Vision

To be a centre of Excellence for quality assurance in education and services in the field of Information and Communication Technology through continuous improvement and upgradation.



## Our Mission

To develop professional manpower and provide quality services in the field of Information and Communication Technology by using State-of-the-Art infrastructure.



# NIELIT Chandigarh

## Salient Features

- Modular and flexible training Programmes.
- Industry Oriented and Practical Based Courses.
- Experienced and Well Qualified Faculty.
- More than 40 years old Institute in Computer Education & Training in the region.
- Latest Teaching Aids and Methodologies.
- Well equipped Labs
- Interactive Learning



# Major NIELIT Activities

## Education and Skilling

M.Sc., B.Sc., BCA, PGDCA in affiliation with Pbi. University

PhD, M.Tech, B.Tech and 3-year Diploma Programmes

Skilling in Emerging Technologies, like AI/ML, Cyber Security, Big Data, Blockchain, AR/VR, Data Analytics, IoT, etc.

R&D with PGI and other such premiere institutes

Corporate Trainings for DRDO, DGR, RCF Kapurthala, DiTech Haryana, STPI, el al.

## Software and Turnkey Projects

NCPUL

**Energy Accounting and Billing System** of PSPCL and UT Chd

National Consumer Price Index (CPI) Calculation System for Ministry of Labour and Employment

**Online Counselling** of UT Education Department Chandigarh

Digitization of Punjab Birth & Death records

## Examination

Complete Recruitment lifecycle solutions for Govt. bodies /depts. From Pre-Exam, Examination, Post Exam Activities

OMR Based, Computer Based / Online Exams

Assessment

## Employment and Incubation Group

Deployment of technical manpower in various government departments

Tie-ups with Industry

Alumni Network placed at various key positions in various MNCs across the world, NGOs and Government Departments

## Sponsored Programmes

**FutureSkills Prime**

**Aspirational District Scheme**

**ESDM**

Directorate General of Employment

**Work Based Learning (WBL),**

**Employability Enhancement & Livelihood (EELTP)**



# NIELIT Chandigarh

Education & Training

Projects

Software Development

NCPUL

Data Processing

Examination Processing

Facility Management

Online Services

## Training & Projects

- ESDM Scheme of Govt. of India
- Corporate trainings to various Govt. departments
- Training under DGE&T scheme
- Training employment exchange officers  
National Career Service Portal
- Training to Panchayati Raj Functionaries
- Training for more than 500 CSC VLEs
- Data Digitization of NPR
- Utility Billing projects for various states
- Software Development and total IT solutions  
for various Govt. departments
- Examination and Certification
- Facility Management



# NIELIT Chandigarh – futuristic technologically ahead

Artificial Intelligence

Internet of Things (IoT)

Big Data Analytics

Augmented & Virtual Reality

Blockchain

Cloud Computing

Cyber Security

Robotic Process Automation



FutureSkills Technology





# Learning at NIELIT



- The Courses here are distinctive for their unique characteristics of being **Industry Oriented** and **practice base**.
- It helps in developing the professional capabilities for meeting requirements of Industry as well as reorient and **update the knowledge skills**.
- The programs are **modular** and **flexible**.
- Personal attention to every student is given during the development of project.
- Technically sound and **experienced faculty** provides the best education and full guidance and support during project work.



**Trained more than One Lakh students in non-formal sector**



# MoU

- NIELIT & I.K.Gujral Punjab Technical University (IKG-PTU) have entered into an MoU to provide Training in the field of IECT and all related areas by NIELIT to students of IKG-PTU affiliated colleges / institutes under following categories:
  - Semester /Industrial Training Programmes of 5-6 months duration
  - Summer Training Programmes of 6-8 weeks duration
- Joint Certification Training Programmes with IIT Ropar under the following categories:
  - Summer (6-8 weeks)/Industrial (6 Months)
  - Finishing School Courses
  - Train the Trainers Workshops
- Punjabi University Patiala - Formal training Programmes





# NIELIT – MoU with Universities



IIT Ropar, Punjab



PEC Chandigarh



Rayat Bahra University, Mohali,  
Punjab



IKG PTU, Jalandhar, Punjab



Lamrin Tech Skill University,  
SBS Nagar, Punjab



MIMIT, Malout, Punjab



Govt. College Ropar, Punjab



IET Bhadhal, Punjab



Institute for Development and  
Communication (IDC) , Chandigarh



Gobindgarh Public College  
Ludhiana Punjab



रा.इ.सू.प्रौ.सं  
NIELIT

# NIELIT – MoU with Universities



Delhi Technological University



Netaji Subhas University of Technology



Dr. A.P.J. Abdul Kalam Technical



Tripura University



Chhattisgarh Swami Vivekanand Technical University



Madan Mohan Malaviya University Of Technology



Dr. B. R. Ambedkar University Delhi



Dr B R Ambedkar National Law University Sonepat



Dr. Babasaheb Ambedkar Marathwada University



# NIELIT - MoU with Academic Institutions



All India Council for Technical Education



United Nations Educational,  
Scientific and Cultural  
Organization



Institution of Electronics and  
Telecommunication Engineers



Central Board of Secondary  
Education



Electronics Sector Skills Council  
of India



National Institute of  
Technology Delhi



L&T Skill Trainers Academy



Atal Bihari Vajpayee Indian  
Institute of Information  
Technology and Management



CSC Academy



National Skill Development  
Corporation



Indira Gandhi National Tribal  
University



Bharatiya Shiksha Board



Directorate General of Training



Centre for Good Governance



# NIELIT – MoU with Industry



Indigrid Technology Private  
Limited



INTEL



HCL



SoCTeamup Semiconductors  
Pvt. Ltd



Monster.com India



National E-Governance Division



Snapdeal



Telecom Sector Skill Council



Telecommunications  
Consultants India



Insurance Regulatory and  
Development Authority

<https://nielit.gov.in/content/mou-industry-academic-institutions-universities>



# Education & Training

## Long Term Course

- ✓ NIELIT 'O' Level Computer Course
- ✓ NIELIT 'A' Level Computer Course
- ✓ NIELIT 'B' Level Computer Course
- ✓ NIELIT 'O' Level on Hardware Maintenance
- ✓ NIELIT 'A' Level on Hardware Maintenance
- ✓ Post Graduate Diploma in Computer Applications
- ✓ Diploma in Computer Hardware

## Short Term Course



- ✓ Artificial Intelligence and Machine Learning
- ✓ Cloud Computing and Virtualization
- ✓ JAVA, Python, ASP.Net with C# / VB.Net
- ✓ PHP with MY SQL and CMS
- ✓ Cyber Security
- ✓ Networking-CCNA V 5.0 Routing & Switching
- ✓ Data Analytics/Big Data
- ✓ Electronic Product Design (EPD)
- ✓ Internet of Things (IoT)
- ✓ Raspberry pi with Python
- ✓ Embedded System Design- 8051, ARM7



# Corporate Training

## Govt. Department/organization

- ✓ Rail Coach Factory(RCF), Kapurthala
- ✓ Punjab Police IT Wing
- ✓ DiTech – Haryana Govt.
- ✓ CEPTAM – DRDO
- ✓ Labour Department, Haryana
- ✓ Health Department, Punjab
- ✓ Punjab Mandi Board
- ✓ Haryana State Pollution Control Board
- ✓ Economical and Statistical Organization, Haryana
- ✓ PGI, Chandigarh

## Govt. Dept./University

- ✓ DCRUST, Murthal, Haryana State Govt. University
- ✓ GNDU Amritsar, Punjab State Govt. University
- ✓ Uttarakhand Technical University, Dehradun
- ✓ SKUAST, Jammu and Kashmir State Govt. University
- ✓ State Aids Control Society, Chandigarh
- ✓ Zila Welfare Office, Chandigarh
- ✓ State Bank of India





# Centre of Excellence





# Industry TieUps - CISCO Networking Academy



NIELIT Chandigarh is part of **CISCO Networking Academy** Programme since 2005

- Cisco Networking Academy has changed the lives of 10.9 million students in 180 countries by providing education, technical training, and career mentorship, since last 20 years.
- Cisco Networking Academy is a global education programme that teaches students how to **design, build, troubleshoot, and secure computer networks** for increased access to career and economic opportunities in communities around the world.
- More than 6 million people have joined the Networking Academy and become a force for change in the digital economy since 1997.





# CISCO Networking Academy



Courses under **CISCO Networking Academy** includes:

- Networking
- Internet of Things
- Operating Systems
- Programming
- Cyber Security



**Cisco Networking Academy**

Corporate Social Responsibility

Certificate of Course Completion

Introduction to IoT

The student has successfully achieved student level credential for completing Introduction to IoT course administered by the undersigned instructor. The student was able to proficiently:

- Explain how IoT are businesses and go
- Explain the importance of society.

**manjot singh**  
Student  
**NIELIT Chandigarh**  
Academy Name  
**India**  
Location

**Dr. Sarwan Singh**  
Instructor

**PYTHON INSTITUTE**  
OpenEDG Python Institute Authorized Academy Program

**OPEN EDG**

Statement of Achievement

**PCAP: Programming Essentials in Python**

The graduate of the **PCAP: Programming Essentials in Python** course, provided by **Cisco Networking Academy®** in collaboration with **OpenEDG Python Institute**:

- knows the universal concepts of computer programming, including variables, data structures, algorithms, control flow, functions, and exceptions;
- can proficiently use the developer tools, the runtime environment, and the syntax and semantics of the Python language;
- can use fundamental programming techniques, best practices, customs, and vocabulary, including the most common standard library functions in Python 3;
- can write Python programs using standard language infrastructure, and knows the means by which to resolve typical implementation problems;
- knows how to work with modules and packages, process text and binary files, and use generators, iterators, and closures;
- understands the fundamentals of object-oriented programming (OOP) and the way they are adopted in Python.

**Faisal Yaseen Shah**  
Student

Maciek Wicha  
VP & CEO, OpenEDG

27 Mar 2022  
Date

Dr. Sarwan Singh  
NIELIT Chandigarh

[www.netacad.com](http://www.netacad.com) | [www.pythoninstitute.org](http://www.pythoninstitute.org)



# Embedded System Design & Application

## Embedded System Design & Application

23rd-27th September, 2024

Day (Date)	Session 1 (9.30 AM - 10.30 AM)	Session 2 (10.45 AM - 11.50 AM)	Session 3 (12.00 AM - 1 PM)		Session 4 (2 PM - 3 PM)	Session 5 (3 PM - 4 PM)	Session 6 (4.15 PM - 5.15 PM)
Day 1 (23rd sept, 24)	Inaugural Session	Embedded System Design - Introduction	Embedded System Design using Arduino Platform	Lunch Break	Intrefacing LED and Button	Hands-On	Programming and circuit Simulation using Proteus
Day 2 (24th sept, 24)	Embedded C Programming	Hands-On	Intrefacing LCD		Hands-On	Interfacing Keypad	Hands-On
Day 3 (25th sept, 24)	Communication Protocol- I2C, SPI	Hands-On	Using I2C and SPI protocol		Hands-On	Interfacing Bluetooth devices	Hands-On
Day 4 (26th sept, 24)	NodeMCU- Introduction, applications, configuration	Hands-On	Building IoT applications using NodeMCU		Hands-On	Cloud based IoT applications using NodeMCU	Hands-On
Day 5 (27th sept, 24)	Basics of Networking	Hands-On	Introduction to Real Time Operating System (RTOS)		RTOS Programming using Arduino	Hands-On	Valedictory Session
LAB/Classroom:	213				Tea Break :	10.30am - 10.45 am 4pm - 4.15pm	



# NIELIT Ropar campus



# Faculty @ NIELIT Ropar

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# Faculty @ Data Analytics Division

Dr. Manish Arora

- ✓ PhD, Punjab University
- ✓ DOEACC C Level
- ✓ MCA GNDU Amritsar
- ✓ M.B.A. with specialization in Operation Management
- ✓ More than 27 years of experience in technologies like C, DSTC, Software Engineering, Big Data Analytics, Cloud Computing, .Net, SQL Server.



Dr. Sharmistha

- ✓ PhD
- ✓ MSc, BSc
- ✓ 25 years of experience in Big Data Analytics, Cloud Computing, .Net, SQL Server.



# Faculty @ AI and Machine Learning Division

Anita Budhiraja

- ✓ B. Level, C Level (Mtech)
- ✓ 28 years of experience in training, research, R & D product designing



Dr. Sarwan Singh

- ✓ PhD
- ✓ C Level, B Level (MCA)
- ✓ MSc, B.Sc. (Electronics)
- ✓ 25 years of experience in Training, Software Development, Networking, Product Design
- ✓ Currently working in areas of Cloud computing, Internet of Things(IoT), Machine learning, AI, Blockchain



Suman Heera

- ✓ B. Tech (CSE)
- ✓ M. Tech(pursuing)
- ✓ 15 years of experience in training





# Faculty @ Electronics Division

Dr. Sarwan Singh

- ✓ PhD
- ✓ C Level, B Level (MCA)
- ✓ MSc, B.Sc. (Electronics)
- ✓ 25 years of experience in Training, Software Development, Networking, Product Design
- ✓ Currently working in areas of Cloud computing, Internet of Things(IoT), Machine learning, AI, Blockchain



Prakash Pratik

- ✓ B. Tech(ECE) NIT Patna
- ✓ M.S. (IIT Mandi)
- ✓ 8 years of experience in training, research, R & D product designing



Akhil Arora

- ✓ B. Tech (ECE), M. Tech (ECE)
- ✓ 15 years of experience in training



Jaspreet Singh

- ✓ B. Tech (ECE)
- ✓ 9 years of experience in training, maintenance, hardware and networking





# Faculty @ Cyber Security Division

Raminder Singh



- ✓ BTech(CSE) SLIET
- ✓ Mtech(CSE) PTU
- ✓ 20 years experience in Information Security and Digital payment Awareness, Advanced Networks (CCNA), Cyber Security
- ✓ Cisco Local Academy Instructor
- ✓ EC Council Certified Ethical Hacking Instructor

Akash Saran



- ✓ B. Tech(IT) IIIT Allahabad
- ✓ PGDISS
- ✓ 4 years of experience at Software Engineer in Samsung R&D , Noida
- ✓ 2 years of experience in Cyber security & Web Designing



# Faculty @ Computer Application Division

Dr. Sunita Chib

- ✓ Ph.D (Computer Science and Applications)
- ✓ Master of Computer Science (MCS)
- ✓ Bachelor of Computer Science (BCS)
- ✓ 20 years experience in training, project execution, Software Development, NCPUL IT Education Project/Examination



Meenu Mohindra

- ✓ M.Sc Computer Science
- ✓ Doeacc 'A' Level (IT)
- ✓ M.A Economics
- ✓ 25 years of experience in Web Development PHP - MySQL, Robotics Process Automation, Unix, Databases and Software Development of Electricity/Water Billing Projects

Meenu Dhir

- ✓ B.E Computer Science
- ✓ 20+ years of experience in teaching computer science education, with expertise in Big Data Analytics, Web Technologies, Hadoop - Spark and Java.



Jyoti Sharma

- ✓ MCA
- ✓ 25+ years of experience in Augmented and Virtual Reality PHP and MySQL Multimedia



# Students @ NIELIT campus

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# CEPTAM – DRDO

Training in domain of

- AI-ML,
- Electronics,
- Skill Development / office Automation

ESDA@ 2019



NIELIT CHANDIGARH



गण सूची सं  
NIELIT

G20  
भारत 2023 INDIA

# CEPTAM - DRDO

@ 2021





# CEPTAM - DRDO

Sep@ 2022



Aug@ 2022



# CEPTAM - DRDO

@ 2023

G20  
भारत 2023 INDIA



Top Row :  
(left to right)

Sh. Marpu Sudhir Kumar TO 'A' CVRDE Chennai, Sh. Abhishek Kumar Jha TO 'A' RCI Hyderabad, Sh. Prakash Pratik STA NIELIT Ropar, Dr. Sanjeev kr. Gupta Executive Director NIELIT Ropar, Dr. Manish Arora Addl. Director NIELIT Ropar, Dr. Sarwan Singh Scientist-D NIELIT Ropar, Sh. Anuj Kumar Shaw STA 'B' DIBER Haldwani, Sh. Devadutta Prusti TO 'A' LRDE Bengaluru

Middle Row :  
(left to right)

Sh. Mithun Mohan C TO 'A' NPOL Kochi, Sh. K Ranga Babu STA 'B' CHESS Hyderabad, Sh. Sarata Kumar Nandi TO 'A' CAIR Bengaluru, Sh. Abhishek Tripathi STA 'B' DEBEL Bengaluru

Front Row :  
(left to right)

Ms. Kaveri TO 'B' LRDE Bengaluru, Sh. Sintu Kumar TO 'A' CAIR Bengaluru, Sh. Rajesh M STA 'B' NPOL Kochi, Ms. Riya Kumari STA 'B' NPOL Kochi, Ms. Adya Kumari STA 'B' CASDIC Bengaluru, Ms. Surya OV TO 'B' LRDE Bengaluru, Sh. Sunil Kumar TECH 'A' CASDIC Bengaluru, Sh. Kapil STA 'B' CASDIC Bengaluru



# Students from Nagaland University

@ 2021



@ 2023



@ 2019

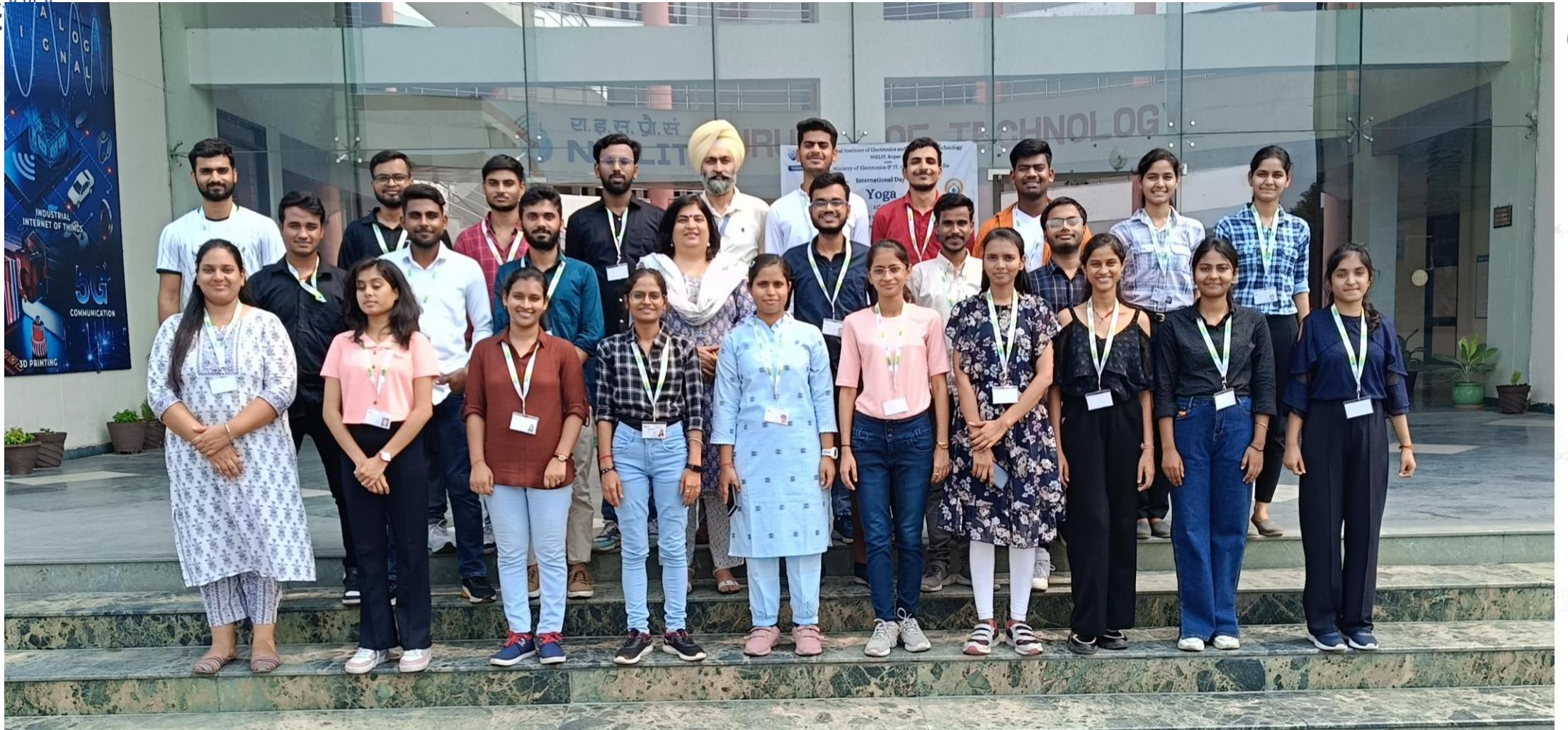


@ 2019





# Students from MG Central University, Bihar



@ 2024



# Campus next to IIT Ropar



PIM





# NIELIT students at IIT Ropar

- 2019 onwards ...

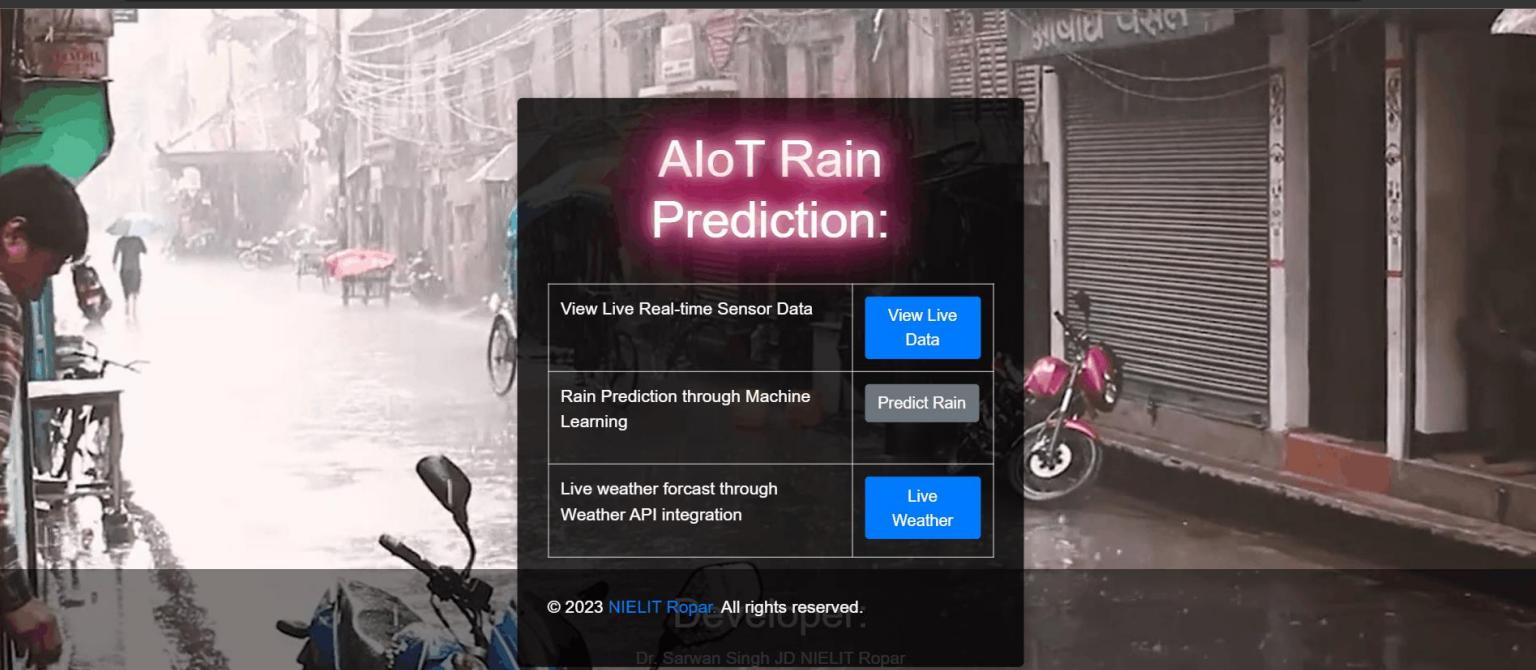


# Projects

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**NIELIT**

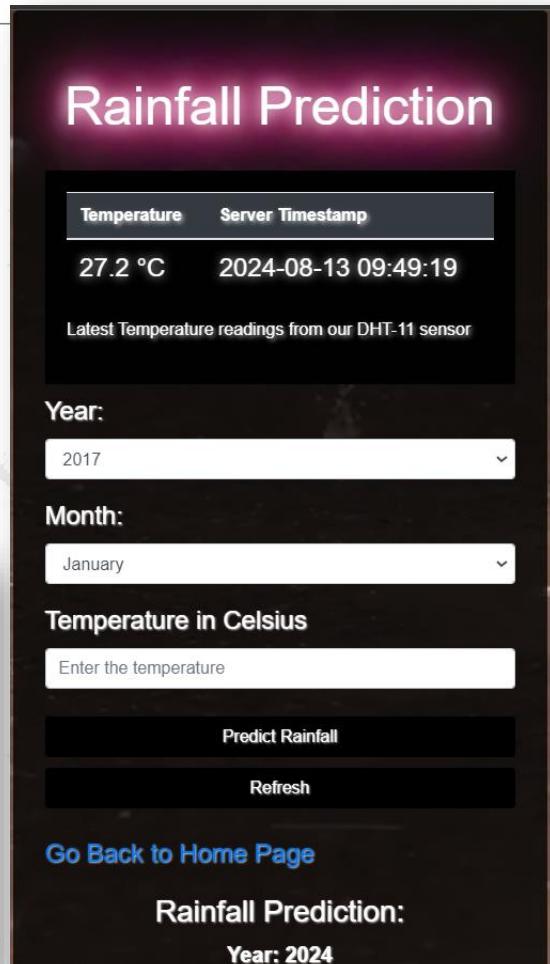


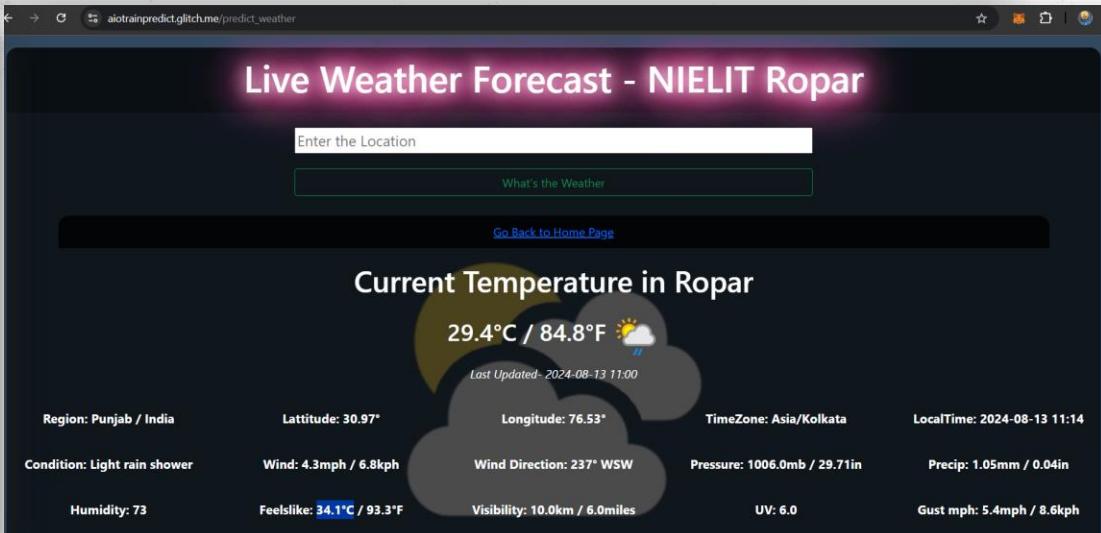
## AIoT Rain Prediction:

View Live Real-time Sensor Data	View Live Data
Rain Prediction through Machine Learning	Predict Rain
Live weather forecast through Weather API integration	Live Weather

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Dr. Sarwan Singh JD NIELIT Ropar







**Rainfall Prediction**

Temperature	Server Timestamp
27.2 °C	2024-08-13 09:49:19

Latest Temperature readings from our DHT-11 sensor

**Year:**

**Month:**

**Temperature in Celsius**

**Predict Rainfall**

**Refresh**

**Go Back to Home Page**

**Rainfall Prediction:** **Year: 2024**



# IoT Web server (Data Collection Panel)

Screenshot of the IoT Data Collection Panel web application.

The browser address bar shows: `iotwebserver.glitch.me`

The page title is: **IoT Data Collection Panel**

The navigation menu includes: **IoT-DCP**, **Home**, **About**, **Show Data**, **Search**, **Sign IN**, and **Sign UP**.

**Sensor Data**

ID	User Name	Sensor Name	Temperature	Humidity	DateTime
189	CGClandran	sensor102	26.0	95.0	13-08-2024
188	CGClandran	sensor102	24.0	68.0	13-08-2024
187	CGClandran	sensor102	25.0	70.0	13-08-2024
186	CGClandran	sensor102	27.0	95.0	13-08-2024
185	CGClandran	sensor102	26.0	66.0	13-08-2024
184	CGClandran	sensor102	26.0	66.0	13-08-2024
183	CGClandran	sensor102	27.0	53.0	13-08-2024
182	CGClandran	sensor102	27.0	56.0	13-08-2024
181	CGClandran	sensor102	25.0	56.0	13-08-2024
180	CGClandran	sensor101	25.0	71.0	13-08-2024