

NIELIT Virtual Academy

INTERSHIP PROSPECTUS

Name of the Internship: Online Internship in IoT Data Analysis

Internship Code: IN12

Mode of Conduction: Online

Starting Date: 20th May 2026

Last date of registration: 17th May 2026

Duration: 6 Weeks

Objective of the Course

- ✓ To develop the skills required to implement an Internet of Things system and the integration of IoT solutions with analytics tools, for analysis of the IoT data being collected by the fleet of devices.

Outcome of the Course

- ✓ Understand the Evolution of IoT, reference architecture and
- ✓ Developed problem-solving capability using Python scripts
- ✓ Able to use Descriptive & Inferential Statistics concepts and Data Analytics tools
- ✓ Provide hands-on for highly deterministic real-time applications

Course Fee: Rs: 1000/-**(inclusive of GST)**

Eligibility: Pursuing an Undergraduate level course or above

Methodology

- ✓ Teaching Mode: Self-Pace
- ✓ Access from anywhere anytime
- ✓ Content Access through e-learning portal
- ✓ Doubt Removal Session
- ✓ Covers both Theory & Practical
- ✓ Certification: On completion of the Mini Project

Registration Link: <http://nva.nielit.gov.in>

Contact Details:

- ✓ Course coordinator Name: Mr.Prasanth BR
- ✓ Email: trng.chennai@nielit.gov.in; contact.nva@nielit.gov.in
- ✓ Mobile number: **7598730125**

Course Structure:

Module No	Module Title
1	IoT Concepts
2	Python Programming
3	Data Science and Analytics
4	Machine Learning
5	Project

Syllabus:

Detailed Syllabus

Module 1: IoT Concepts

- ✓ Introduction to IoT, WoT and M2M
- ✓ Basics of Internet & Review of TCP/IP
- ✓ IoT Layering concepts
- ✓ Introduction to Wireless Sensor Networks
- ✓ Routing Protocols in WSN
- ✓ Wireless PAN
- ✓ Different PAN standards - Bluetooth & Zigbee, GSM, Wifi
- ✓ IoT Development Boards
- ✓ Data logging
- ✓ IoT Data Analytics

Module 2: Python Programming

- ✓ An Introduction to Python
- ✓ Beginning Python Basics
- ✓ Python Program Flow
- ✓ Functions & Modules
- ✓ Exceptions Handling
- ✓ File Handling
- ✓ Classes in Python

Module 3: Data Science and Analytics

- ✓ An Introduction to Data Science and Analytics
- ✓ Data Analysis Using NumPy,
- ✓ Data Analysis Using Pandas
- ✓ Data Visualization – Pandas, Matplotlib, Seaborn, Plotly and Cufflinks
- ✓ Statistical Learning
- ✓ Descriptive & Inferential Statistics,
- ✓ Probability Concept: Marginal, Joint & Conditional Probability, Bayes Theorem
- ✓ Probability Distributions,
- ✓ Entropy & Information Gain,
- ✓ Regression & Correlation,
- ✓ Confusion Matrix, Bias & Variance

Module 4: Machine Learning

- ✓ Introduction to Machine Learning
- ✓ Linear Regression
- ✓ Logistic Regression
- ✓ K-Means Clustering
- ✓ Decision Tree
- ✓ K-Nearest Neighbors
- ✓ Support Vector Machine

Module 5. Project

- ✓ Capstone project
- ✓ Project Report Submission