INTERNSHIP PROGRAM ON AI/ ML & EMBEDDED SYSTEMS

Organised by Department of Electrical Engineering, NIT Silchar, Assam

ABOUT

The program is an initiative of NIT Silchar as a part of the educational consultancy of the department & approved by the competent authority for the issue of certificates by NIT Silchar.

ELIGIBILITY CRITERIA

- 1st Year to 3rd Year B. Tech Students
- Postgraduate Students
- Students of Final Year Polytechnic Institutes

EMERGING AREAS

- AI/ ML: Theory & Hands-on Training
- Embedded Systems: Theory & Hands-on Training
- Signal & Image Processing: Theory & Hands-on Training
- IoT & Robotics: Theory & Hands-on Training
- Building Projects related to above
- Python Programming

Course Fees

Basic: 22 Hrs./ 8000 INR

Advanced: 42 Hrs./ 12000 INR

(Pay using QR code)

Coordinators

Dr. Rajeeb Dey | **Dr. Tapan Pradhan** | **Dr. Prasanta Roy** | **Dr. Biswarup Ganguly**

Students Benefits

- Skill Development
- Project Development & Prototyping
- Report Writing
- Presentation Skill
- Certificate from NIT Silchar

10th June – 31st July

QR Code for SBI Collect under EED Consultancy and IPR category

No ACCOMODATION will be provided

Course Details

Download course structure details from
http://eed.nits.ac.in/wp-content/uploads/2024/06/Course-Content.pdf

Further Details

For any query, contact us via eed.nits.intern@gmail.com +91-9432125545

Registration

- Registration can be done via https://forms.gle/46VpuavrZ1CTLAyA8
- No Course Fees for Students of NIT Silchar

INTERNSHIP FOR UG/PG STUDENTS

ON

DEVELOPMENT OF EMBEDDED SYSTEMS FOR SIGNAL & IMAGE PROCESSING APPLICATIONS USING AI/ML TECHNIQUES

Duration of the Course: Basic Level-2 Weeks (20 Hours; 2 hrs/ day)

Advanced Level- 4 Weeks (40 Hours; 2 hrs/ day)

Sl. No.	Topic	Nature of Training	Duration (Bas/ Adv.)	Program Outcomes (PO)
1	Introduction to Signals and Systems, continuous and discrete-time signals.	Theory	1 H	PO1
2	Generation of basic signals, step, ramp, impulse, exponential, sinusoidal	Theory	1 H	PO1
3	Numerical computation of derivative, integration, SVD/EVD and other algorithms such as FFT, convolution etc.	Theory	1 H	PO2
4	Fundamentals of Digital Image Processing (DIP) and application in MATLAB/ Embedded platform	Theory	2 H / 3 H	PO5
5	Embedded system and its application in digital signal and image processing	Theory	2 H/ 3 H	PO5
6	Introduction to Artificial Intelligence and Machine Learning Algorithms.	Theory	2H/3H	PO6
7	Introduction to Arduino (UNO/ MEGA/ NANO) & Raspberry Pi (3B/ 4B) with real time data processing	Practical	-/ 4 H	PO2
8	Design and implementation of Infinite Impulse Response (IIR) filter using Arduino UNO/ Raspberry Pi/ DSP Evaluation board.	Practical	2 H/ 4 H	PO3
9	Design and implementation of Finite Impulse Response (FIR) filter (Platform- Raspberry Pi/ DSP Evaluation board/ Arduino UNO)	Practical	2 H/ 4 H	PO3
10	Interaction with Biomedical signals, ECG monitor, Heart Rate monitor, Blood Pressure monitor, Pacemaker simulation and Biomedical signal sensing and monitoring	Practical	2 H/ 4H	PO4
11	Application of image processing in medical imaging and satellite imaging using AI/ML Techniques.	Practical	2 H/ 4 H	PO6
12	Application of Digital Filter in audio signal processing	Practical	2 H/ 4 H	PO3
13	Hands on training with DSP development platform, Arduino and doubt clearing session	Practical	3 H	PO5
14	Development of Prototypes using Arduino/ R-Pi/ DSP Board in Real Time	Practical	-/ 4 H	PO5
	Total duration		**22 H/ 42 H**	