

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### Report on Three Day Tech Boot-camp on Arduino

1	Name of the Activity/Event	Arduino Day & Tech 4 Society Boot Camp		
2	Date of Activity/Event	23-03-2023 to 25-03-2023		
3	Organized by/Name of the committee	Dept. of Electronics & Communication Engineering, IETE Students Forum (ISF)		
4	Place of Activity/event	Visvesvaraya Auditorium , Narayana Engineering College,Nellore		
5	Resource person/guest/organization	1) Sripath Roy, Asst. Prof. ECE, Executive Committee, Swecha AP 2) Lakshman M, Data Science Developer, Flipkart 3) Bharat P, Full Stack Developer, Mphasis 4) Selva Raj, Volunteer, Swecha AP		
6	Type of activity/Event	Workshop		
7	Activity/Event objectives	This is a hands-on, projects-based approach to learning the Arduino platform catered to all levels of experience		
8	Participation	Students	Faculty	Total Participation
		95	NIL	95
9	General remarks	The session was conducted smoothly		
10	Suggested Improvements	No		
11	Enclosures	1. Request letter 2. Circulars 3. Report 4. Attendance 5. Feed Back form		
12	Zoom video link:	Offline		
13	Signature of in charge/convener			

Learners who wish to enter or improve in technological disciplines such as Internet of things, cyber security, data analysis, and software development are increasingly turning to bootcamp training.

Participating in a Technical Boot Camp is one technique for overcoming the perceived and actual obstacles that undergraduate students have in an introductory programming course. The Arduino bootcamp was held from March 23 to March 25, 2023, to help students improve their knowledge. The number of students attended was 75.

The goal of this three-day bootcamp was to bring together the various technologies produced by the participants and explain how they work. Tutorials for their work were offered by experts.



***Students explaining their project to Principal and HOD-ECE***

The bootcamp was divided into two sections of activities. The first section included technical talks and hands-on instruction on the Arduino board. The participants gained a broad range of knowledge that they may apply in real-time applications. During the programme, students visited the nearby village Nelatur from college and engaged with rural people to learn about the difficulties they face in everyday life. Then, based on their observations, they began to implement remedies to the difficulties.

- This is a hands-on, project-based method to learning the Arduino platform for people of various skill levels. Students in this course created projects such as:
- An Arduino automobile that can be controlled remotely using a smart phone app
- An Arduino phone that can make and receive phone calls as well as send and receive text messages; and
- A Universal Arduino Remote that can copy and replay IR signals from any electronic device.

- An Arduino Online weather Station, which connects to the internet and retrieves and displays weather data based on your location.
- Arduino gaming projects that make use of light, sound and joysticks.



*Students ready to Depart to Nelatur*



*Students at the boot camp*

Students quickly became familiar with Arduino by creating an entire project from scratch at bootcamp.

Here's the approach for each project:

- We first provided a detailed background on all electronics principles and the operation of the electrical components of each project.
- Component wiring and project layout are handled in schematics.
- Presented detailed step-by-step videos for wiring and assembling the components of your project.
- Code uploaded to demonstrate the project.
- A detailed line-by-line code review was then presented, explaining how the software and hardware components interacted. The entire project is now complete. What a better way to learn Arduino by creating a working project from scratch!



***Students explaining the working models to the Principal and HOD-ECE***

Project-based learning is therefore the best approach, where participants actually learn by doing and building something that actually works. This is the best approach to follow in this course.