Akhil Bhartiya Maratha Shikshan Parishad (A.B.M.S Parishad), an educational trust was founded by a team of renowned educationists and social reformers. It was established in 1907 with the objective of serving the downtrodden masses. The institute is situated in the area of 10 acres of land surrounded by beautiful landscape of Sa- hyadri Hills of Western Ghats nearing to famous Parvati Hills. Site is surrounded by lush of green and scenic beauty, fresh air, free from pollution and abandoned water supply. The college offers Under Graduate program in Computer Engg, E&TC, IT, Civil and Mechanical Engg. , MCA and BVoc. Courses. Institute has Post Graduate Program in Civil, Mechanical Engg. , Computer and VLSI Design and PhD programs of Civil and Mechanical Engineering approved by AICTE and Affiliated to Savitribai Phule Pune University

Department Faculties

Dr. Amar B . Deshmukh

Prof. Vaishali V. Bhimte

Prof. Sharad S. Jagtap

Prof. Ashwini Suryawanshi

Prof. Nikita Bhagat

Prof. Shridevi Kumbhare

Prof. Anil Naikwade

Prof. Prachi Admane

Prof. Priyanka Patange

Prof. Shivkanya Rasal

Prof. Sneha Salvekar

Innovation Club Members:

Dr. N.B. Pasalkar
Ex. Director of Technical Educa- tion, Gov. of Maharashtra

Dr. A. R. Saraf Trustee—Science & Technology Park, Pune.

Mr. A. M. Marathe
Industry Leaders for Global Busi- ness Solution Centre E&U, IBM, Pune

Mr. S. V. Natu
M.D., Nital Computer System Pvt Ltd Pune

Mr. D. N. Modak
Ex. Chief Engineer, Hydro Pro- ject, Pune

Mr. Ramesh Adavi
Expert Consultant in Data Science
Dr. N. S. Raman
Ex. Director,CSIR-NEERI Nagpur

Dr.S.S.Mantha, Ex. Chairman, AICTE
Mr.Ashok Ranade
Project Manager—Softline, Inc.San Jose, California

Mr. M. B. Vaidya Director, Precision Power Products Pvt. Ltd, Pune
Dr. P. W. Kelkar
Director, Brightstar Electronics Pvt. Ltd. Pune

Mr. P. S. Kapileshwar
Ex. Chief Hydrology Unit, MMRDA

Dr. Shaila Subbaraman
Ex. Dean Academics, WCE, Sagali

Dr. Sharadchandra Lohokare Founder CEO JYOSH AI Solution Pvt. Ltd

Akhil Bhartiya Maratha Shikshan Parishad's

Anantrao Pawar College of Engineering & Research

Parvati , Pune 411009

Department of Electronics and Telecommunication

Organizes

"SMART EMBEDDED SYSTEMS AND IOT INNOVATION BOOTCAMP"

Duration of Workshop

11th - 15th October, 2025

VENUE

Computer Lab / Room No. 325
E & TC Department

Akhil Bhartiya Maratha Shikshan Parishad's
Anantrao Pawar College of Engineering & Research
S. No. 103, Shahu College Road, Laxminagar,
Parvati , Pune 411009

Akhil Bhartiya Maratha Shikshan Parishad's

Anantrao Pawar College of Engineering & Research, Pune

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Treasurer, ABMS Parishad, Pune

Convener

Dr. Sunil B. Thakare

Principal

Co-Convener

Dr. Amar B. Deshmukh

HOD, E & TC Department

IQAC Coordinator

Prof. Ganesh Kondhalkar

Workshop Co-ordinators

Prof. Anil M. Naikwade (9405060737)

Prof. Sharad S. Jagtap (9730616145)

Schedule

10.00 am to 11.15 am	11.30 am to 12.45 pm		2 pm to 3.15 pm	3.30 pm to 4.45pm
Day 1				
	SECTION –I Introduction to 8051 Microcontroller		**SECTION-II 8051 Peripheral Interface**	
Day 2				
SECTION –I Introduction to PIC 18F4520/50			**SECTION-II PIC Peripherals Interface**	
Day 3				
SECTION –I Introduction ARM 7 LPC2148			**SECTION-II ARM Cortex M3 LPC1768**	
Day 4				
SECTION –I Introduction to ESP8266			**SECTION-II Node MCU**	
Day 5				
SECTION –I Introduction to Raspberry Pi			**SECTION-II Raspberry Pi Peripheral Interface**	

AKHIL BHARATIYA MARATHA SHIKSHAN PARISHAD's

ANANTRAO PAWAR COLLEGE OF ENGINEERING & RESEARCH PARVATI PUNE 411009

Department of Electronics and Telecommunication

In Association with

HYC Technology

Rajiv Gandhi Infotech Park, Hinjewadi, Pune-411057

Organizes

5- Days Workshop

on

"SMART EMBEDDED SYSTEMS AND IOT INNOVATION BOOTCAMP"

11th - 15th October, 2025

Registration Link

https://surl.li/knegho

	Akhil Bharatiya Maratha Shikshan Parishad's Anantrao Pawar College of Engineering & Research	
	Record No.: ACA/D/021 **Revision: 00**	**DoI: 01/02/2025**
	Event Report	

Name of Event: "SMART EMBEDDED SYSTEMS AND IOT INNOVATION BOOTCAMP"

Date of Event: 11/10/2025- 15/10/2025 (5 Days)

Time of Event: 10:00 AM to 05:00 PM

Organized By: Department of Electronics & Telecommunication Engg.

Name of Event Coordinator: Prof. Anil Naikwade & Prof. Sharad Jagtap

Name of resource Person/ Speaker: *Mr. Narayan Pawar, HYC Technology*

Brief Introduction of Resource Person/Speaker:

Mr. Narayan Pawar is the **Chief Executive Officer (CEO) of HYC Technology**, a leading company specializing in Embedded Systems, Internet of Things (IoT) solutions, and industrial automation. With extensive experience in electronics design, embedded product development, and IoT innovation, he has successfully led multiple projects integrating hardware, software, and cloud-based technologies.

Under his leadership, **HYC Technology** has been instrumental in developing smart solutions for sectors such as agriculture, healthcare, and industrial monitoring. Mr. Pawar is also passionate about knowledge sharing and has conducted numerous training programs, workshops, and technical sessions for engineering students and professionals.

His expertise, industry experience, and hands-on approach make him an inspiring mentor for young engineers aspiring to build careers in the domains of **Embedded Systems, IoT, and Product Innovation**.

Objectives:

- **To introduce students to Smart Embedded Systems and IoT technologies** – helping them understand the fundamentals of microcontrollers, sensors, actuators, and connectivity protocols.

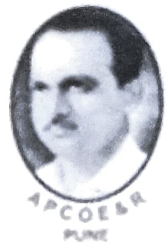
- **To bridge the gap between theory and practical implementation** by providing hands-on training on embedded platforms such as Arduino, Raspberry Pi, and ESP32.
- **To promote innovation and problem-solving skills** through real-time project development focused on smart applications like automation, healthcare, agriculture, and smart cities.
- **To familiarize students with IoT architectures and cloud integration** for remote monitoring, data analytics, and control.
- **To encourage teamwork and interdisciplinary collaboration** among engineering students to design and prototype intelligent IoT-based systems.
- **To enhance employability and entrepreneurial mindset** by exposing participants to emerging technologies, industrial trends, and startup opportunities in the IoT domain.
- **To provide a platform for idea incubation** where participants can conceptualize, design, and present innovative prototypes and solutions.
- **To develop skills in embedded system programming, sensor interfacing, and wireless communication protocols** such as Wi-Fi, Bluetooth, and MQTT.

Target Audience with count: 47 Students

Brief Description of Event:

Trainers: *Mr. Narayan Pawar, HYC Technology and his team.*

For this workshop during inauguration Prof. Anil Naikwade given introduction about training workshop and discussed 5 days schedule of workshop. Dr. Amar Deshmukh, HOD E & TC Department felicitated trainer Mr. Narayan Pawar, CEO, HYC Technology and his team. Prof. Sharad Jagtap given vote of thanks for management, principal, faculties and resource persons. All E & TC department faculties are present for this workshop.



Event Report

The *Smart Embedded Systems and IoT Innovation Bootcamp* is an intensive hands-on workshop designed to equip engineering students with the practical knowledge and skills required to design, develop, and deploy intelligent embedded and IoT-based solutions. The workshop aims to bridge the gap between academic learning and real-world applications by introducing participants to microcontrollers, sensors, actuators, and various IoT communication protocols.

Under the expert guidance of **Mr. Narayan Pawar** from **HYC Technology**, participants will gain exposure to modern embedded development platforms such as Arduino, Raspberry Pi, and ESP32. The sessions will cover system design, hardware interfacing, IoT cloud connectivity, and prototype development. Students will also engage in mini-projects to apply their learning in domains like smart agriculture, home automation, industrial monitoring, and environmental sensing.

Through interactive sessions and hands-on experiments using platforms like Arduino, Raspberry Pi, and ESP32, participants gain real-world experience in building smart and connected devices. The workshop also covers topics such as cloud connectivity, data acquisition, and automation — essential skills highly valued by employers in core electronics, IT, and IoT-driven industries.

By participating in this bootcamp, students enhance their **technical competency, project-building experience, and problem-solving abilities**, making them **better prepared for placements and internships** in sectors such as Embedded Systems, IoT Solutions, Automation, Robotics, and Smart Infrastructure. The workshop encourages innovation, teamwork, and professional readiness — key attributes sought by recruiters in today's competitive job market.

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Event Report		

Day wise Schedule:

10.00 am to 11.15 am	11.30 am to 01:00 pm		2 pm to 5 pm
Day 1			
	SECTION –I Introduction to 8051 Microcontroller		**SECTION-II 8051 Peripheral Interface**
Day 2			
SECTION –I Introduction to PIC 18F4520/50			**SECTION-II PIC Peripherals Interface**
Day 3			
SECTION –I Introduction ARM 7 LPC2148			**SECTION-II ARM Cortex M3 LPC1768**
Day 4			
SECTION –I Introduction to ESP8266			**SECTION-II Node MCU**
Day 5			
SECTION –I Introduction to Raspberry Pi			**SECTION-II Raspberry Pi Peripheral Interface**

Event Report

Outcomes of the Program and its Hustification:

CO1 – Understand Embedded System Fundamentals

- Explain the architecture and functioning of microcontrollers and microprocessors.
- Identify different sensors, actuators, and their applications in smart systems.

CO2 – Develop Embedded System Projects

- Design, program, and implement embedded applications using platforms like Arduino, Raspberry Pi, and ESP32.
- Interface hardware components such as sensors, motors, and displays to embedded boards for real-time applications.

CO3 – Implement IoT Solutions

- Connect embedded devices to cloud platforms for data acquisition, monitoring, and control.
- Work with IoT communication protocols such as MQTT, HTTP, Wi-Fi, and Bluetooth.

CO4 – Analyze and Solve Real-World Problems

- Apply design thinking to conceptualize innovative solutions for smart homes, agriculture, healthcare, and industrial automation.
- Debug and optimize embedded systems for reliability and efficiency.

CO5 – Develop Hands-on Technical Skills

- Gain proficiency in embedded C, Python, and relevant programming tools for hardware interfacing.
- Perform data visualization, cloud integration, and remote monitoring using IoT dashboards.

CO6 – Enhance Employability and Placement Readiness

- Build a portfolio of mini-projects and prototypes demonstrating applied skills.
- Develop problem-solving, teamwork, and project presentation skills valued by recruiters in core electronics, IoT, and automation industries.

CO7 – Foster Innovation and Entrepreneurship

- Identify opportunities for developing IoT-enabled products and solutions.
- Learn to work in multidisciplinary teams to bring ideas from concept to prototype stage.

CO8 – Professional Growth and Industry Awareness

- Understand current industry trends in embedded systems, IoT, and smart technologies.
- Gain insight into startup culture and emerging technologies to guide career decisions.

Mapped POs/PSOs:

Trainig Workshop Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO9	PO12	PSO1	PSO2	PSO3
CO1 – Understand Embedded System Fundamentals	H	H	M	-	-	-	-	-	H	-	-
CO2 – Develop Embedded System Projects	H	H	M	-	M	-	-	-	H	M	-
CO3 – Implement IoT Solutions	H	H	M	M	-	-	-	-	H	M	-
CO4 – Analyze and Solve Real-World Problems	H	H	M	M	M	-	-	-	H	M	-
CO5 – Develop Hands-on Technical Skills	H	H	M	-	M	-	-	-	H	M	-
CO6 – Enhance Employability and Placement Readiness	H	H	-	M	-	M	M	-	-	M	M
CO7 – Foster Innovation and Entrepreneurship	H	H	M	-	M	M	-	-	-	M	M
CO8 – Professional Growth and Industry Awareness	H	H	-	-	-	-	M	M	-	-	M

- **H** – High attainment (strong contribution of CO to PO/PSO)
- **M** – Medium attainment (moderate contribution of CO to PO/PSO)
- **L** – Low attainment (minor contribution of CO to PO/PSO)
- **"-"** – Not mapped

	Akhil Bharatiya Maratha Shikshan Parishad's Anantrao Pawar College of Engineering & Research	
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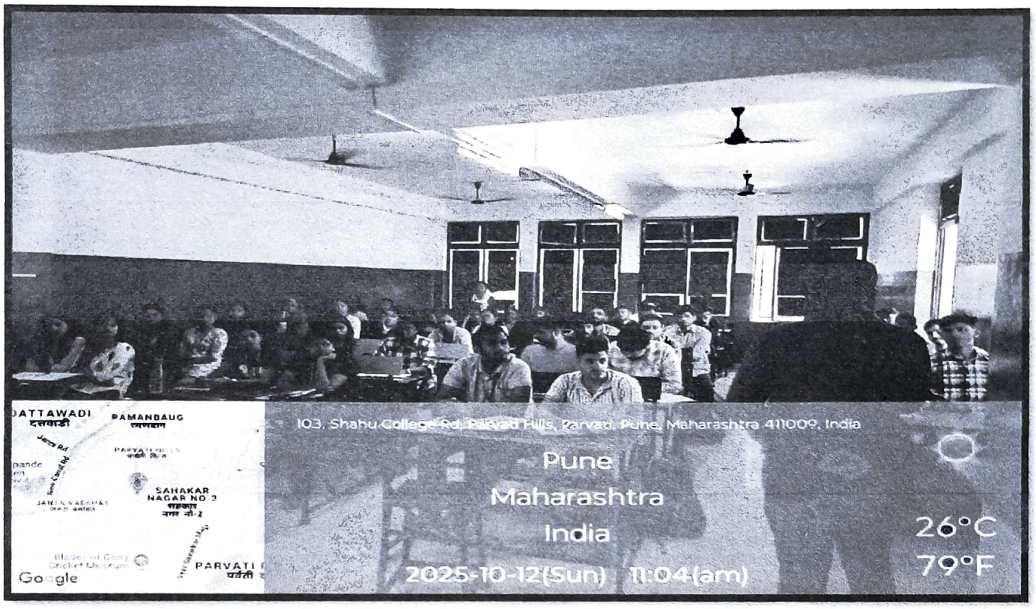
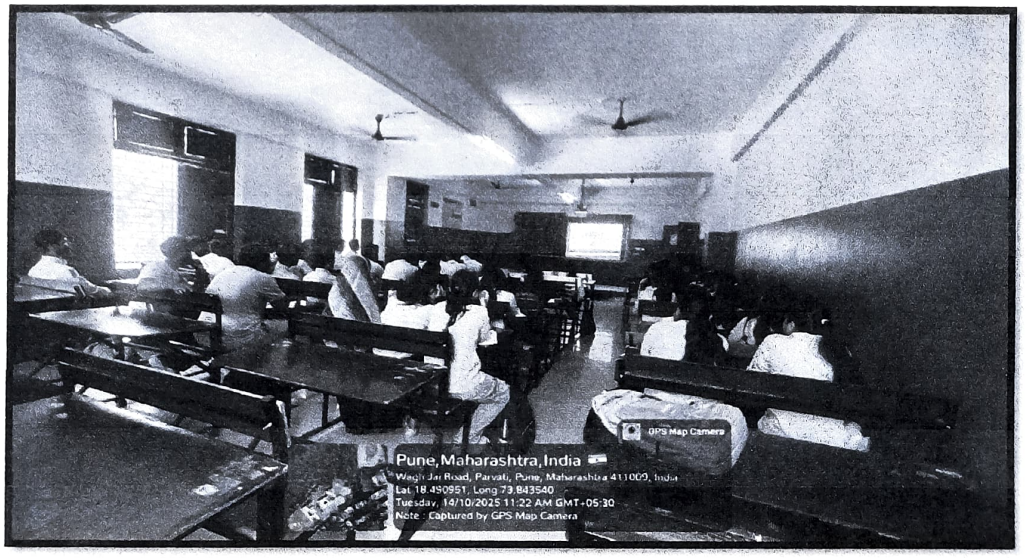
Photographs:



Students attending Embedded Workshop



Students attending Embedded Workshop

Event Report

Students attending Embedded Workshop hands on session

Students performing motor control interfacing using robot

	Akhil Bharatiya Maratha Shikshan Parishad's Anantrao Pawar College of Engineering & Research	
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	Event Report	

All participants and Department faculties

Dr. Amar Deshmukh, HOD E & TC Dept. Felicitating

Mr. Narayan Pawar

Date: 16/10/2025

16/10/25 16/10/25

Prof. Anil Naikwade & Prof. Sharad Jagtap
Coordinators

16/10/2025

Dr. A. B. Deshmukh
HOD, E & TC Dept.

Dr. S.B. Thakare
Principal

Anantrao Pawar College of Engineering & Research ★ Pune