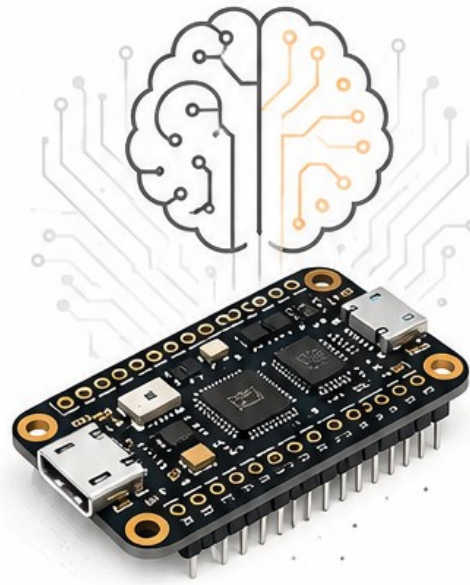


WORKSHOP ON

# TINYML & EDGE AI

Bringing Artificial Intelligence to *Tiny Devices*



- LOW POWER
- PRIVACY
- OFFLINE
- ENERGY EFFICIENT



**DURATION**  
2 Hours



**TARGET AUDIENCE**  
Students, Innovators,  
IoT & Embedded  
Systems Enthusiasts



**IDEAL FOR**  
Beginners &  
Enthusiasts



**LEARN. BUILD.  
EMPOWER.**

## WHAT YOU'LL LEARN

- Introduction to AI, Edge AI & TinyML
- TinyML Workflow (Data → Training → Deployment)
- Hardware Platforms (Arduino, ESP32, STM32, Raspberry Pi Pico)
- Running AI on Microcontrollers
- Real-World Applications
- Hands-on TinyML Demonstration



## TINYML WORKFLOW

- 1 DATA COLLECTION**  
Collect data from sensors
- 2 DATA LABELING**  
Prepare & label the dataset
- 3 MODEL TRAINING**  
Train ML model on PC/Cloud
- 4 MODEL OPTIMIZATION**  
Quantization, Pruning, Compression
- 5 DEPLOYMENT**  
Convert to TensorFlow Lite Micro
- 6 INFERENCE ON DEVICE**  
AI runs on microcontroller in real-time

## HARDWARE PLATFORMS



**ARDUINO NANO 33 BLE SENSE**  
Sensing & Motion Applications



**ESP32**  
IoT + AI Applications



**STM32 NUCLEO**  
Industrial & Embedded Applications



**RASPBERRY PI PICO**  
Education & Prototyping

## REAL-WORLD APPLICATIONS



**HEALTHCARE**  
Wearables,  
Health Monitoring



**INDUSTRIAL IoT**  
Predictive Maintenance,  
Fault Detection



**AGRICULTURE**  
Crop Monitoring,  
Smart Irrigation



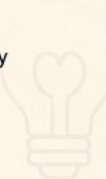
**SMART CITIES**  
Environmental &  
Traffic Monitoring



**VOICE APPLICATIONS**  
Keyword Spotting,  
Voice Commands

## WHY ATTEND?

- Learn the future of Embedded AI
- Explore AI without Cloud Dependency
- Understand Industry-Ready Edge AI Solutions
- Build a foundation for IoT, Robotics & Smart Devices



## KEY TAKEAWAYS

- TinyML Fundamentals
- Edge AI Concepts
- Model Deployment on Resource-Constrained Devices
- Career Opportunities in Embedded & AI Systems



LIMITED SEATS –  
**REGISTER NOW!**



SCAN TO REGISTER



Organised By  
**BISD**  
BHARAT INSTITUTE FOR  
SKILL DEVELOPMENT

Based on Learning Resources from  
**EDGE AI**  
FOUNDATION  
Building the Global Edge AI & TinyML Community

