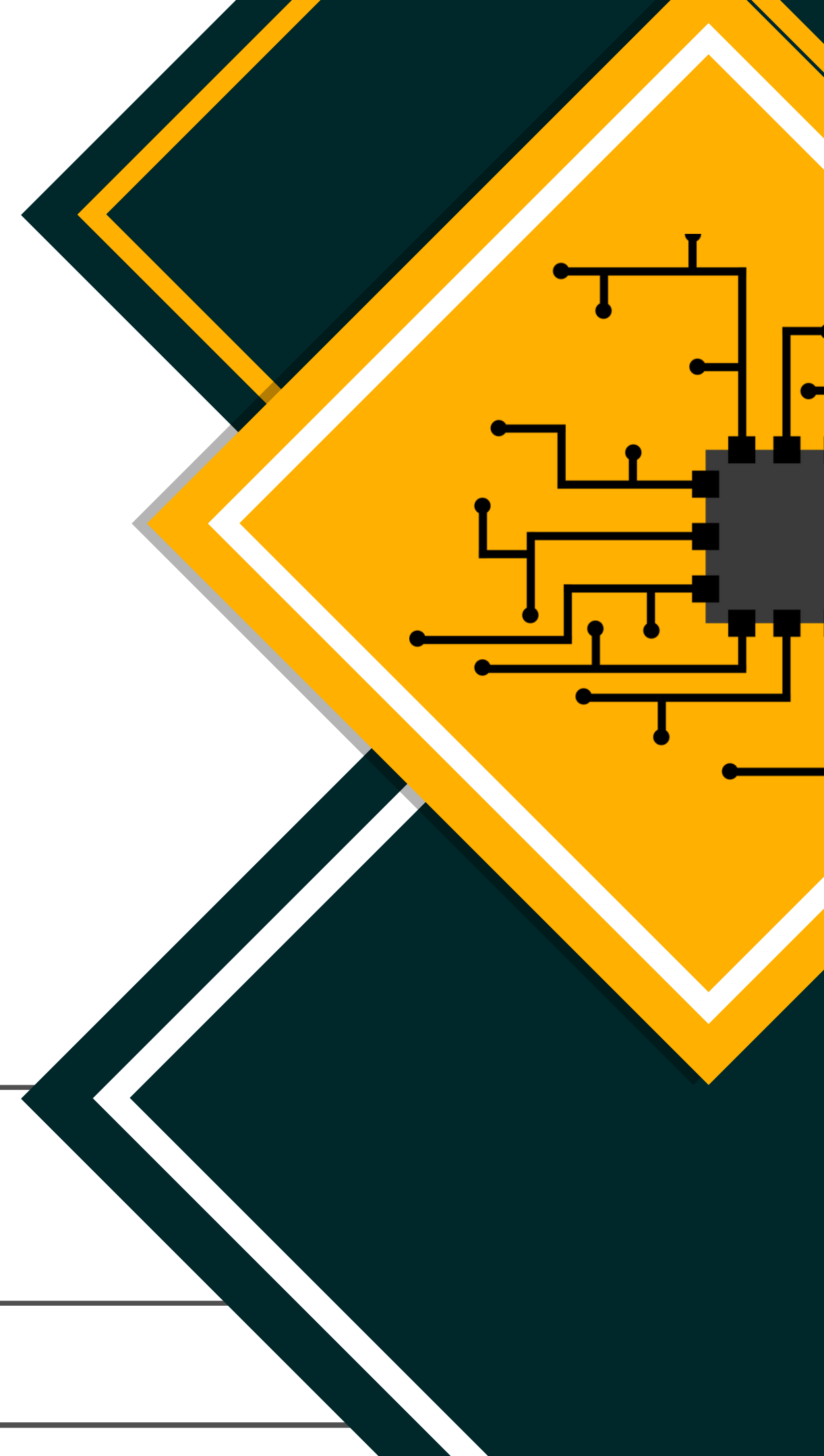
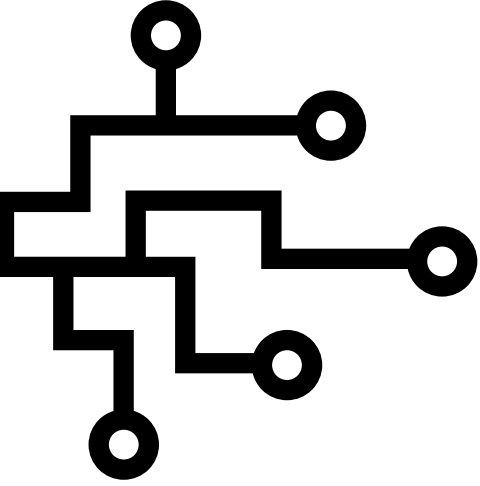




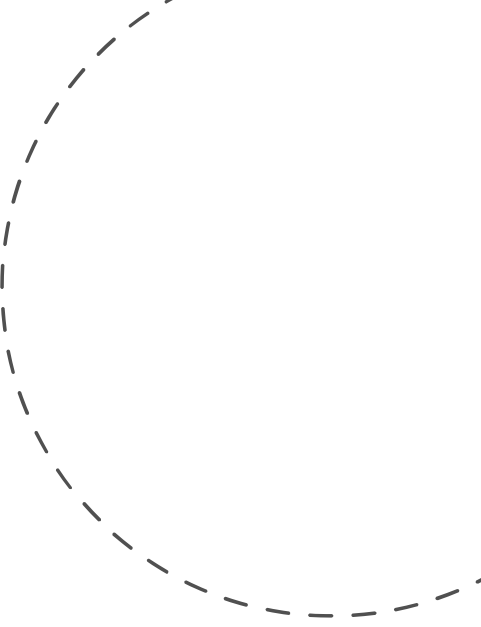
LATEST TECHNOLOGIES IN EMBEDDED SYSTEMS

UNDER GUIDANCE OF – MS.AMRUTA AMUNE





GROUP MEMBERS



Manasi Patil

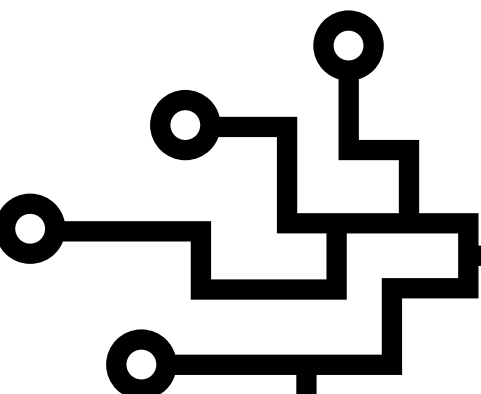
Harshal Sonawane

Chaitanya Patil

Shashank Patil

Bhavin Patil

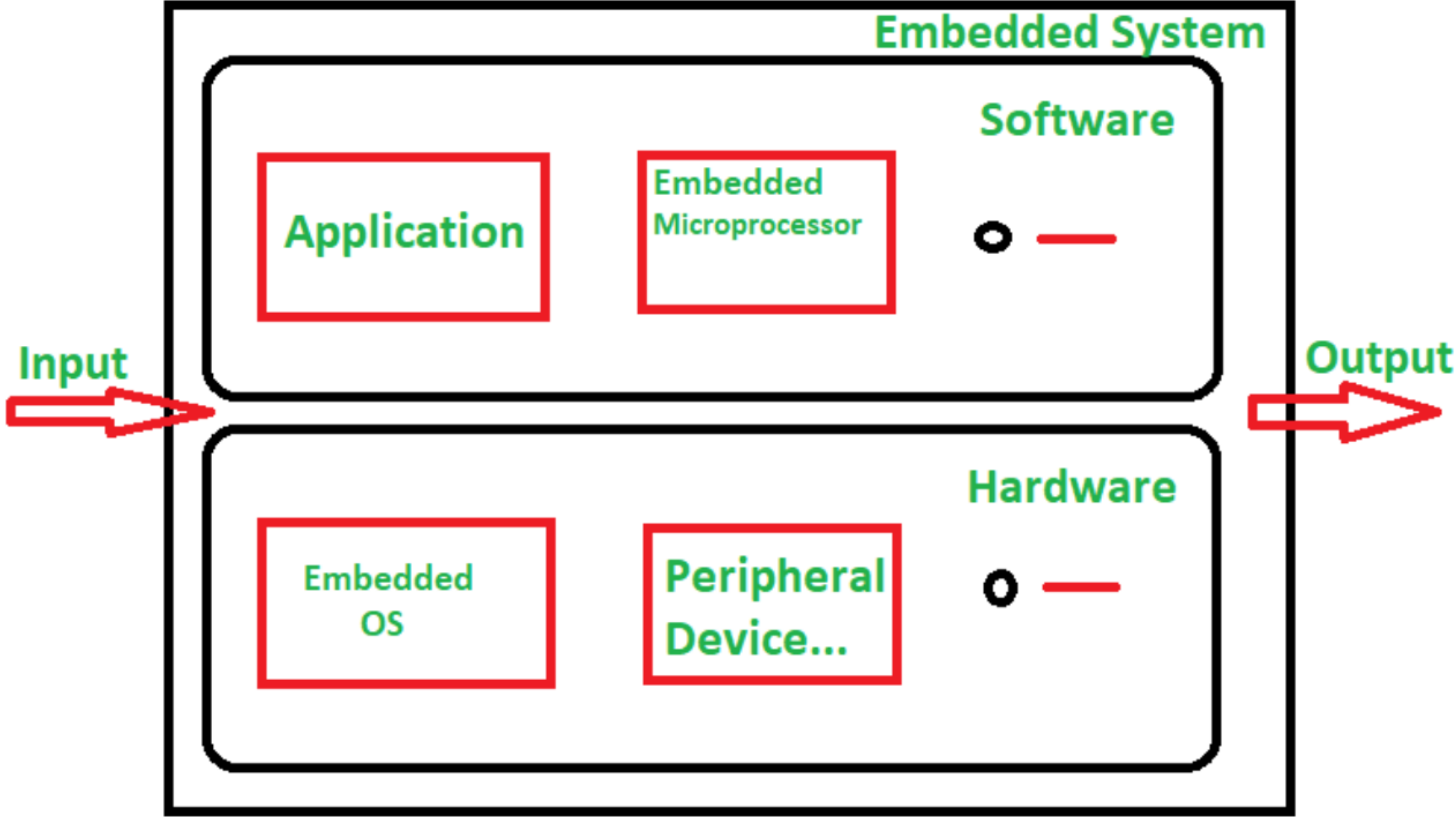
Uma Thakur



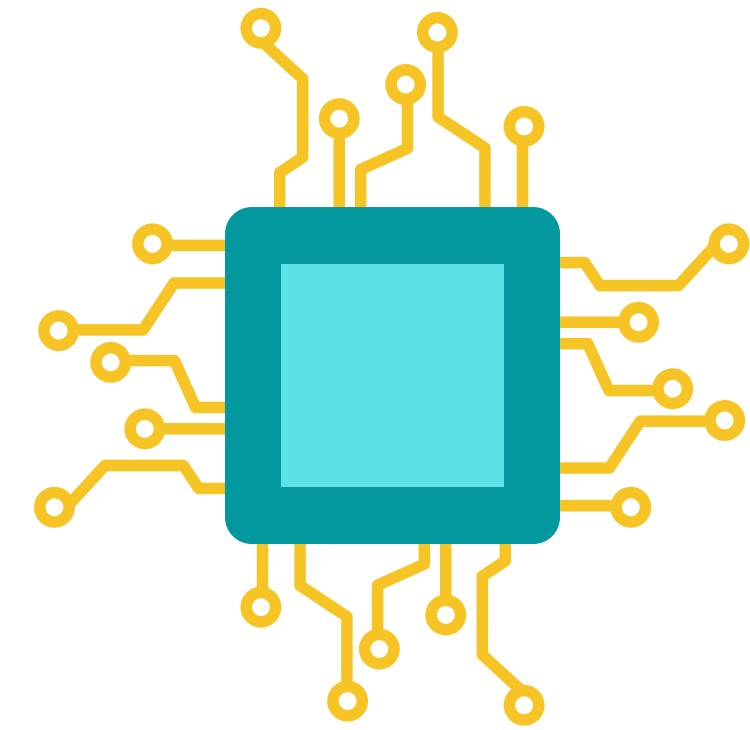
Introduction

- An embedded system is a microprocessor- or microcontroller-based system of hardware and software.
- Designed to perform a dedicated function, either as an independent system or as a part of a large system.

Embedded Sytem Architecture



Benefits of Embedded Systems



- **Easy to manage.**
- **Fast performance.**
- **They are smaller in size.**
- **Hardware benefits and cost-effectiveness.**
- **It can be used in mobile robots and military applications.**
- **It can be used in mobile robots and military applications.**
- **Internet of things (IoT) and embedded systems.**



Latest Technologies

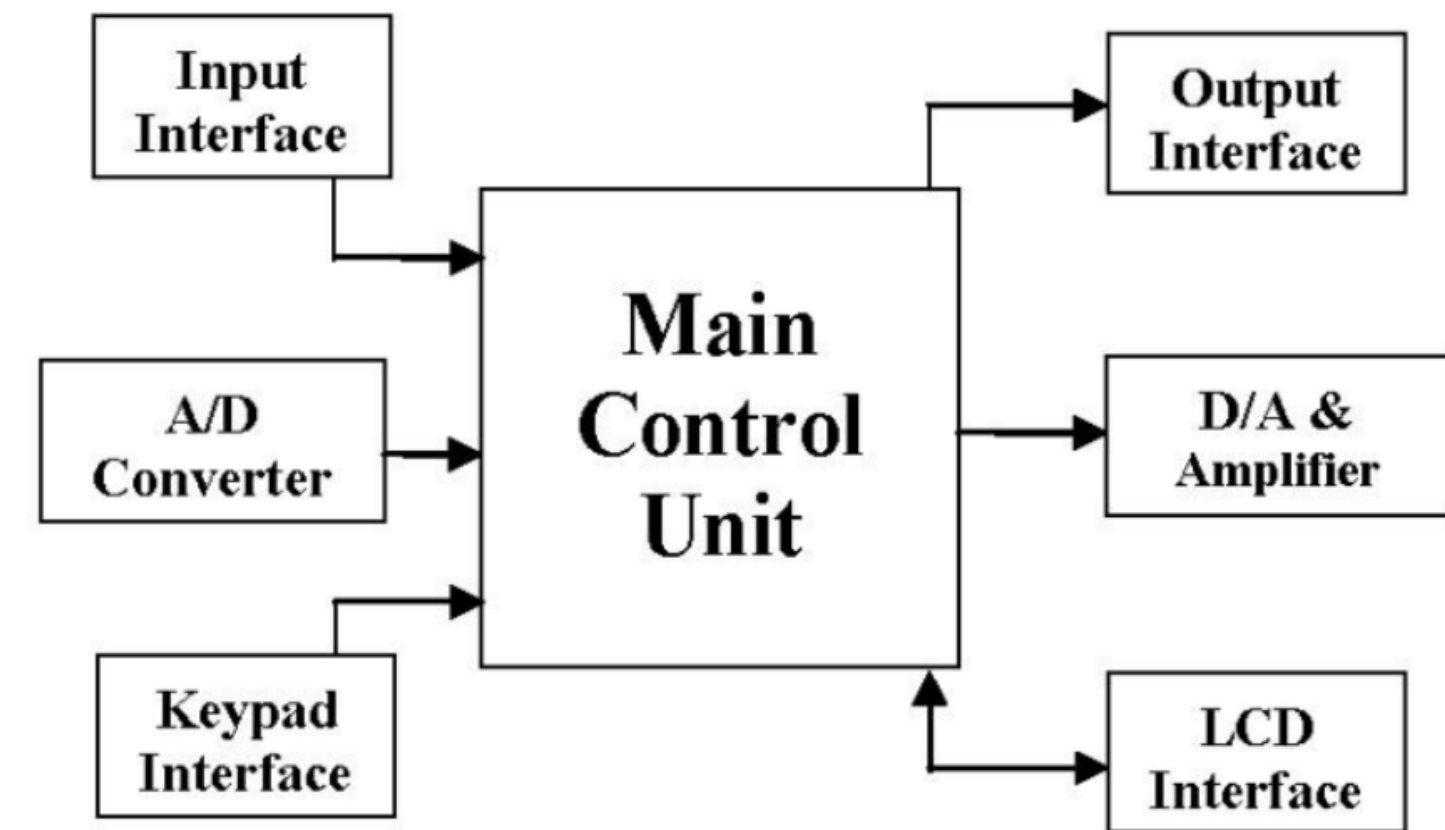
- 1. Real-Time Apple Detection System.**
- 2. Injection Molding Machine.**
- 3. Anti-theft ATM Machine.**
- 4. Renewable Energy using smart Grid Embedded System.**
- 5. 3D Object Detection.**

Real-Time Apple Detection System.

- **“Edge Ai” for Apple Detection**
- **YOLO v3-Tiny Architecture**
- **Intel Movidious Neural Computing Stick [NCS]**
- **Nvidia Jetson Nano & Jetson AGX Xavier**
- **Prediction across different Scales**

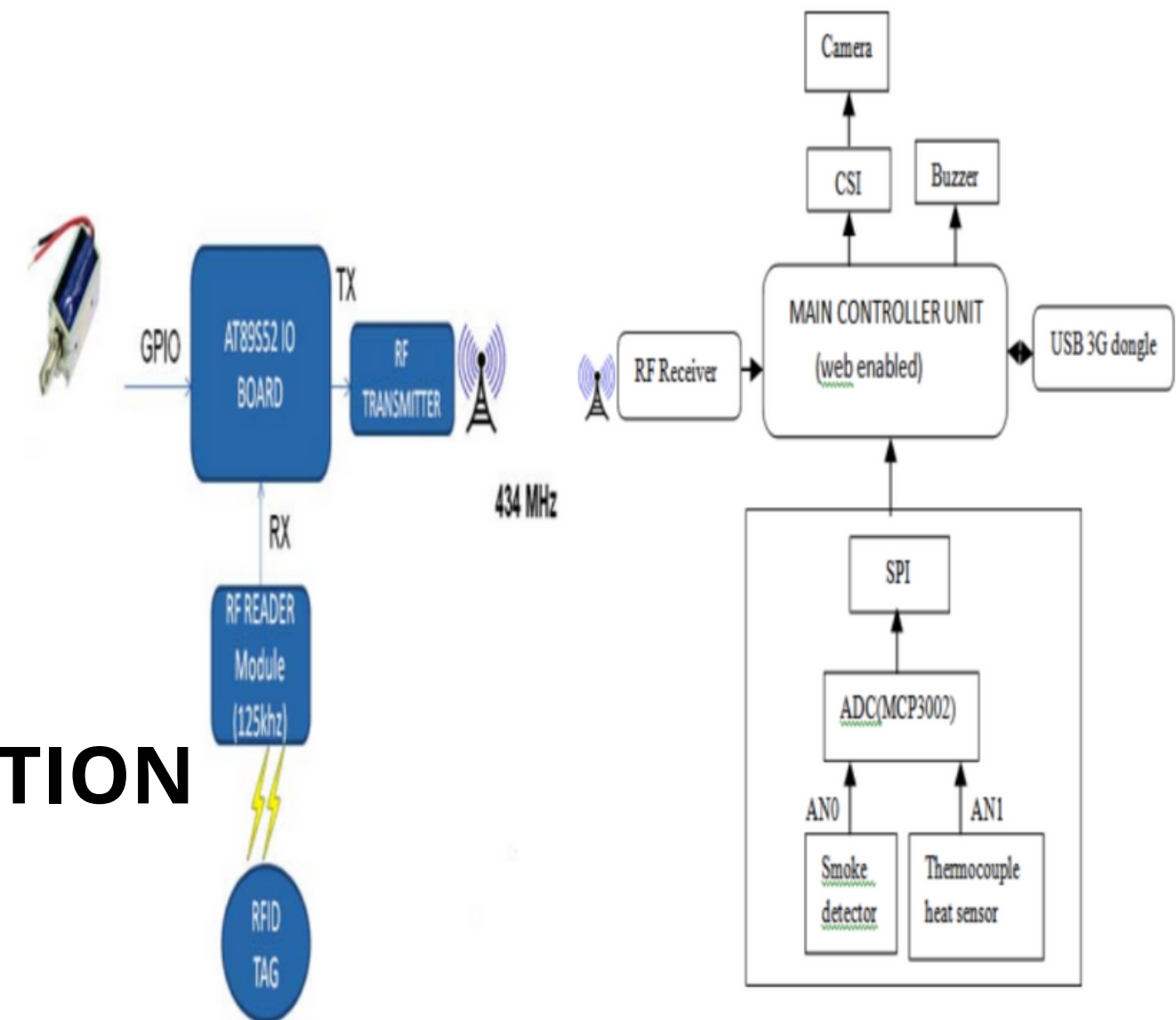
Injection Molding Machine.

- Input interface
- Output Interface
- Interaction components:
LCD Interface
- Security
- User interface



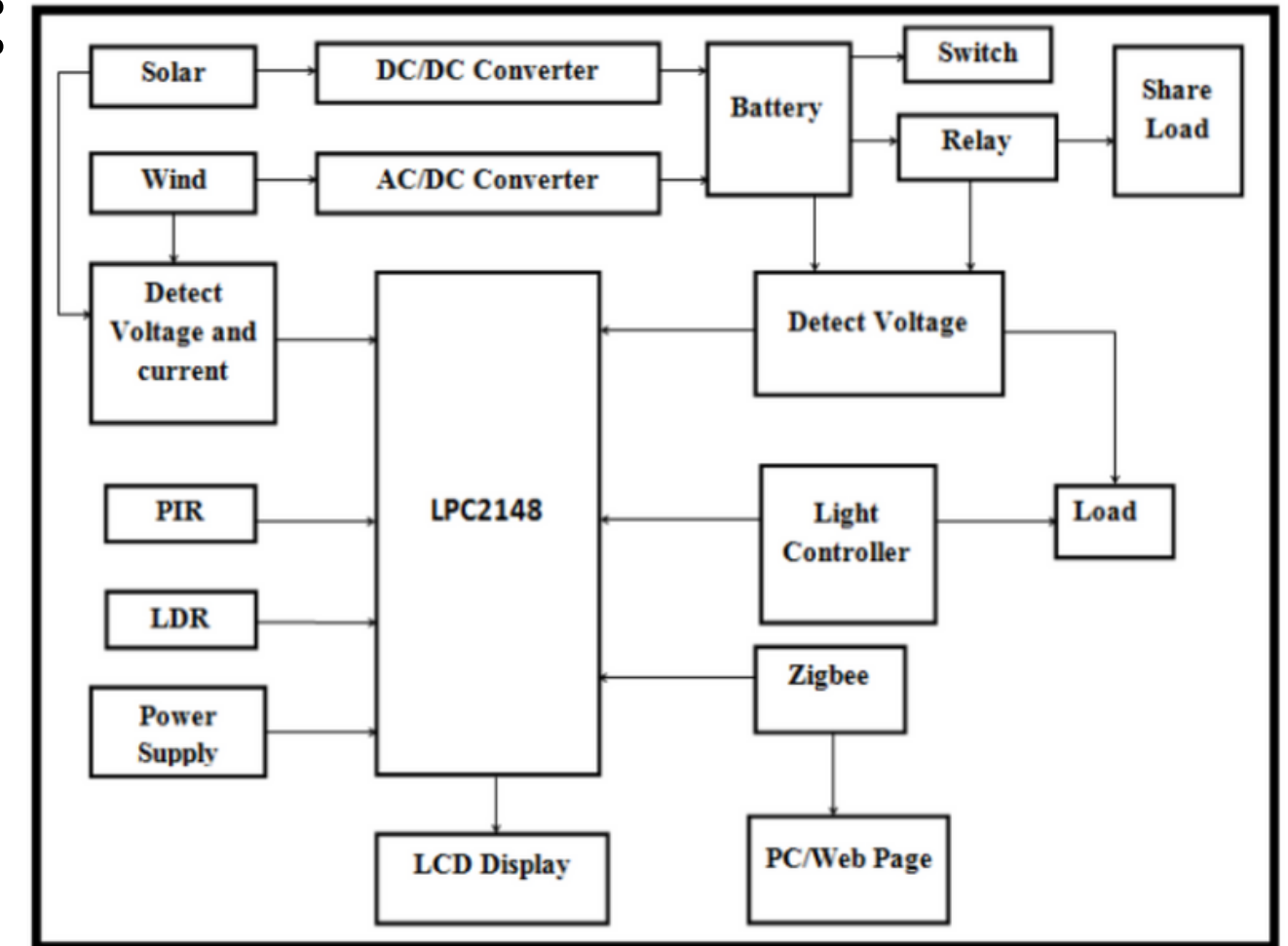
Anti-theft ATM Machine.

- SHUTTER LOCKING SYSTEM
- RF Modules
- RASPBERRY PI WEB SERVER
- RASPBERRY PI CAMERA
- SMOKE DETECTOR AND FLAME DETECTION
- M2M Driven ATM Sites



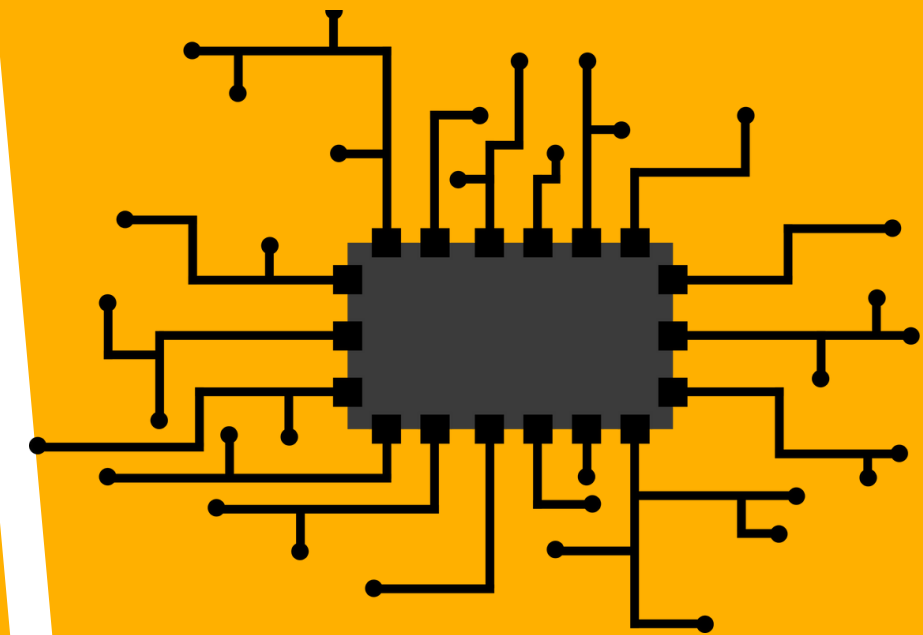
Renewable Energy using smart grid embedded system

- ARM Microcontroller (LPC2148):
- ACS712
- PIR
- Relay
- ZigBee
- Solar
- Battery
- LDR



Conclusion

Embedded systems are rapidly becoming a catalyst for change in the different sectors. Automatic systems in any field will be useful and will save the people and organizations. New innovative applications will make embedded systems as one of the fastest developing technology of the near future. Thus the embedded system plays an important role in our day today life.



Thank
You

