

## LAND MINE DETECTION ROBOT USING GSM GPS

### AIM:

Design and Development of land mine detection robot using GSM GPS.

### PURPOSE:

Security is primary concern of any country. Especially military always focused on security aspects. Finding land mines is very important in security protection. In country borders lot of land mines placed to create terror attacks. Here we propose solution like land mine detection robot using GSM GPS. All land mines contains metal elements.

### DESCRIPTION:

This project includes GSM (Sim800C) module, which is connected to Arduino through UART. GPS module connected to Arduino through UART interface. Metal sensors connected to Arduino digital pins. Two DC gear motors controlled by L293D which is connected to Arduino digital pins. These two gear motors drives robot in different directions. Buzzer connected to Arduino digital pin.

### WORKING:

Here robot controlled by SMS commands. Metal sensor can identify metals. Metal sensor placed in front of robot. While robot moving if any metal identified then robot stopped immediately and send SMS to registered mobile number. All this information will display on 16X2 LCD. SMS contains Google maps location. Using GPS we can track land mine location easily.

## TECHNICAL SPECIFICATIONS:

### HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
GSM	:	SIM800C
GPS	:	NEO-6M
H-Bridge Driver	:	L293D
Motors	:	DC gear motors 60 r.p.m
Metal Sensor	:	Magnetic Coil type
Power Source	:	12v 1amp Battery

### SOFTWARE:

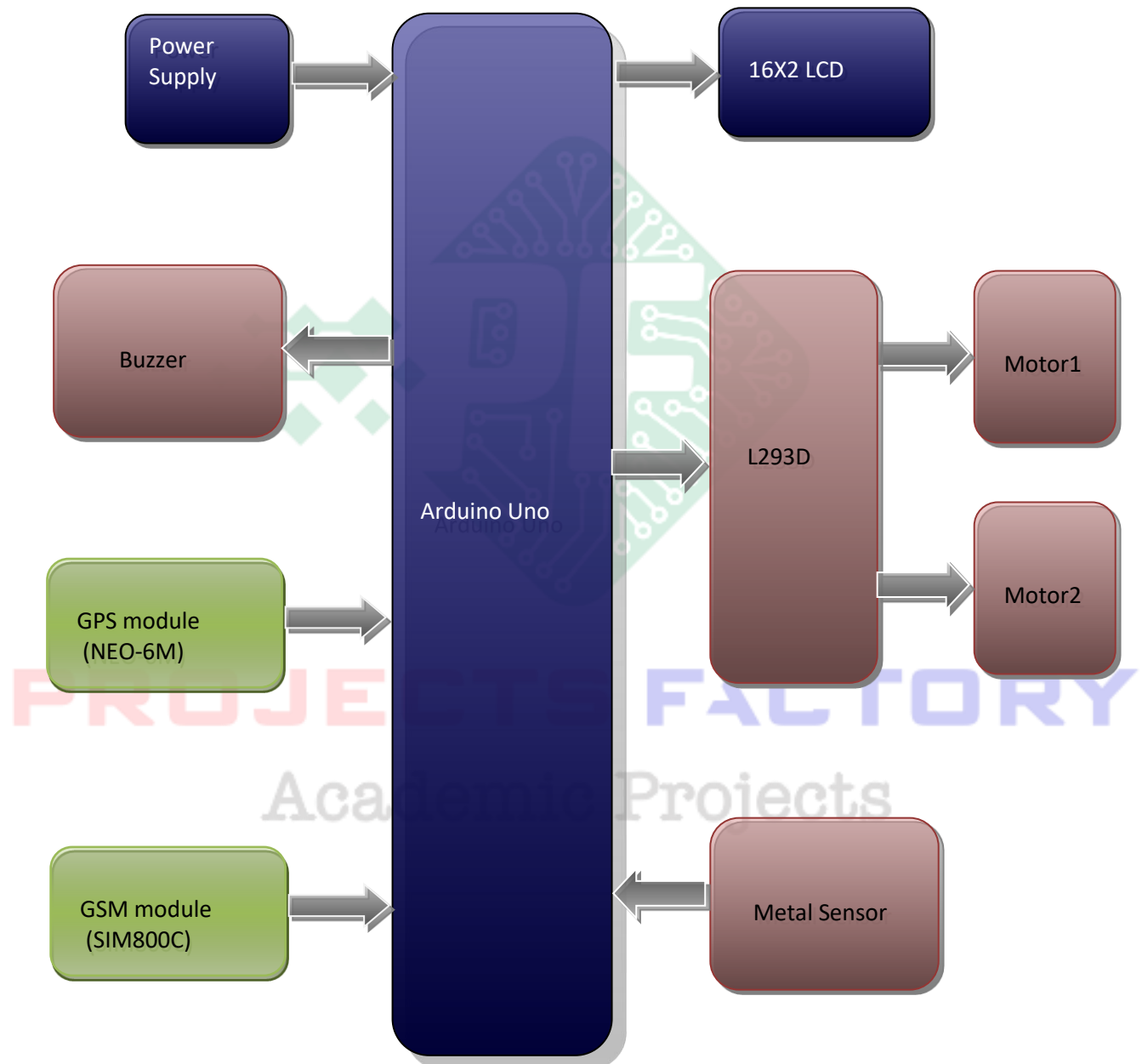
Arduino IDE

Proteus based circuit diagram

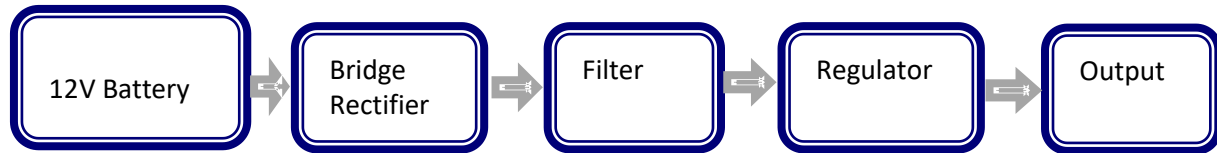
### APPLICATIONS:

- Robotics
- Military
- ARMY
- Security Applications

**BLOCK DIAGRAM:**



## POWER SUPPLY BLOCKDIAGRAM:



## INTERFACES COVERED:

- We have covered GSM (SIM800C) module interfacing
- GPS (NEO-6M) module interfacing
- L293d with two DC gear motors
- Metal sensor interface

**PROJECTS FACTORY**  
Academic Projects