



PDPM Jabalpur

GEO FENCING FOR LOW FLYING OBJECTS



MENTORS
Dr. Manish Kumar Bajpai
Dr.Trivesh Kumar

PRESENTED BY
Chandra Haas
Rakesh
SriHarsha
Sharath naik
Rohith

CONTENT



Introduction



Purpose



Live Demonstration



Introduction

- In this evolving world low flying technology such as drones, UAVs have become a global threat.
- Drones are widely used for aerial photography, surveying, and monitoring, while small aircraft are used for recreation, transportation, and research
- The uncontrolled use of these objects can pose significant risks to public safety and security, such as spying on others and intruding others private space



PURPOSE

- The purpose of the "Geo fencing for low flying objects" project is to develop a system that can disrupt the signal between the drone controller and the drone and prevent them from entering restricted or unauthorized airspace.
- By creating a virtual fence around sensitive areas such as airports, military installations, and other critical infrastructure, the system aims to enhance public safety and prevent unauthorized or dangerous flights.

Proposed Ideas

IR Frequency Jamming

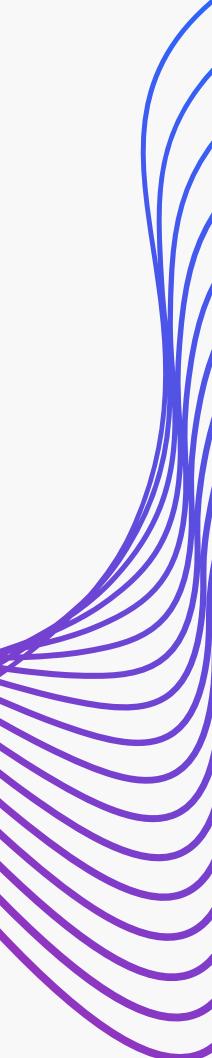
It is a method in which we can block the signal between the controller and the drone by keeping the drone busy by sending the signal continuously

433MHZ Frequency

In this method we jam the signals between the drone controller and the drone using the AV transmitter

2.4GHZ Frequency

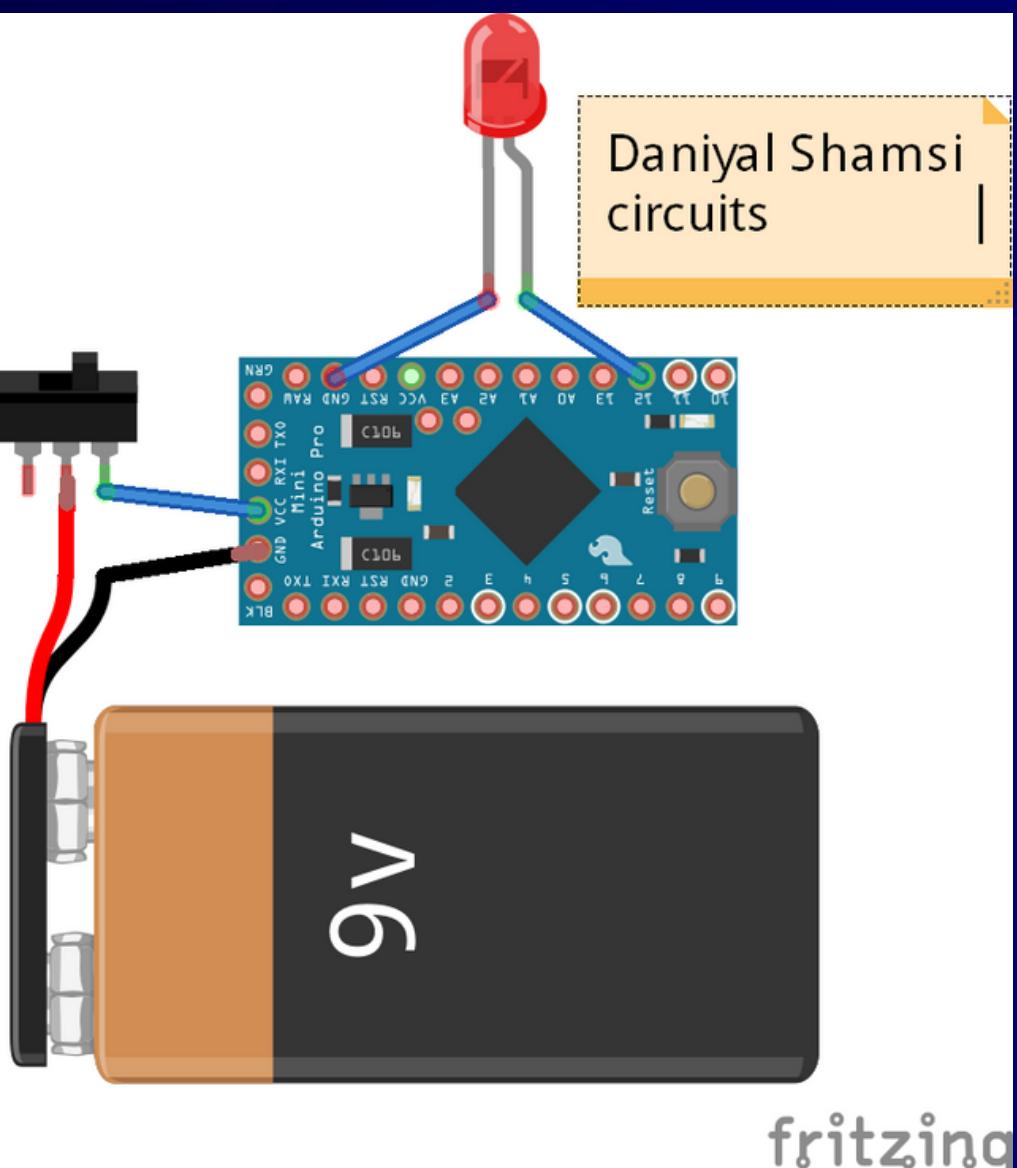
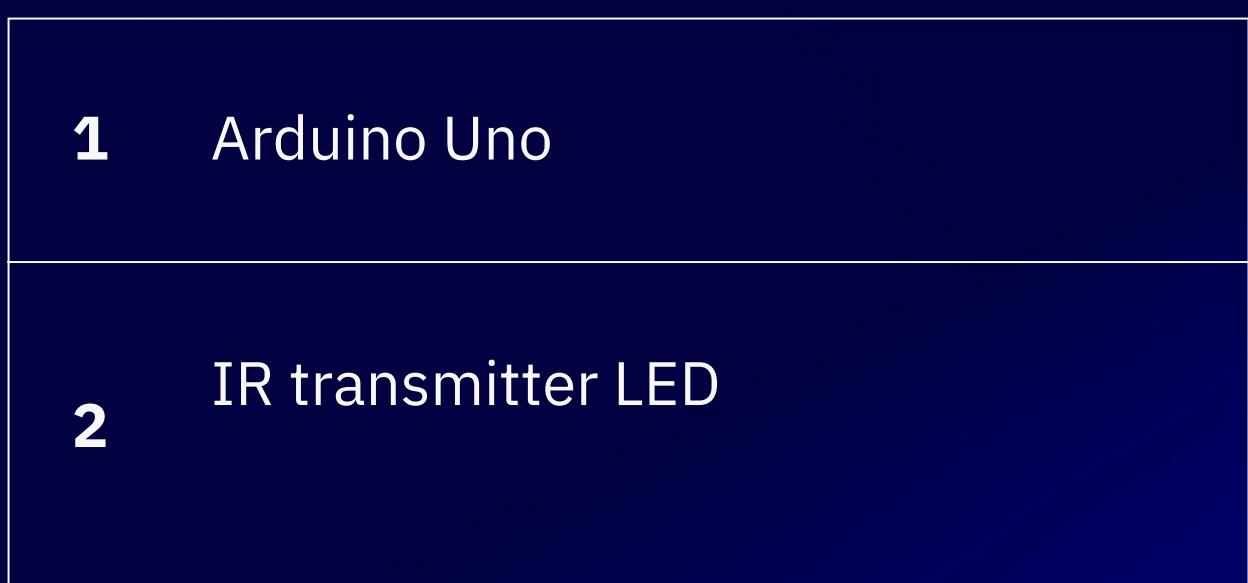
We almost use the same components as the above method but only the models change as we are using the different frequency (I.e 2.4Ghz) and the rest is same





IR Frequency

- Using Arduino Uno, we generate empty signals that would create noisy environment
- This would interfere with the signals and jam the signals.



433MHZ Frequency

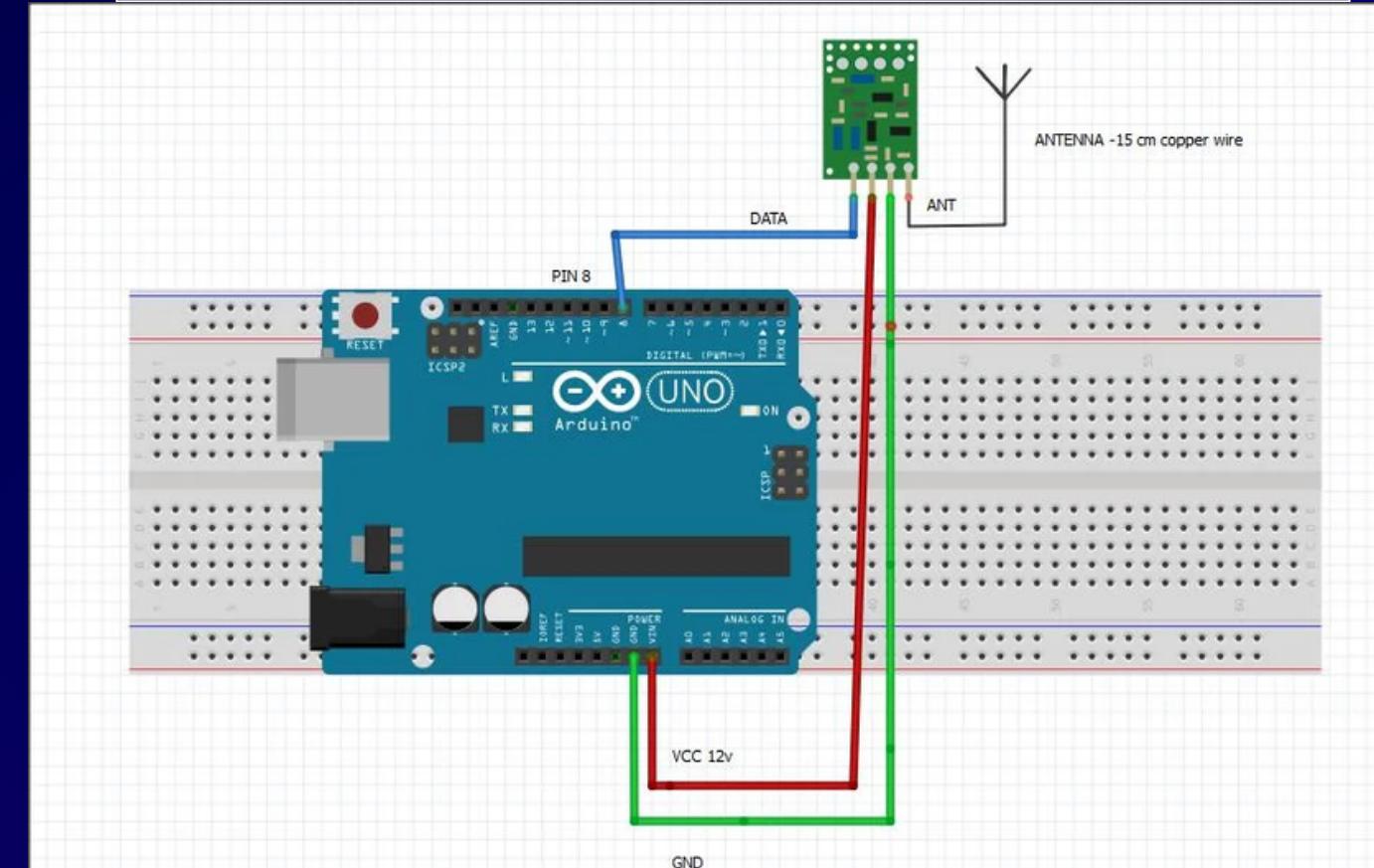
- we send noise into the open which interfere with the actual signal of the drone and the remote, and disrupts the actual message signal and the actual message is not reached to the drone which makes it to lose the control.
- Using the Rf Amplifier we generate a signal of frequency 433Mhz, and using FS100aTransmitter and the antenna we send the signal into the air. We connect the components using the arduino

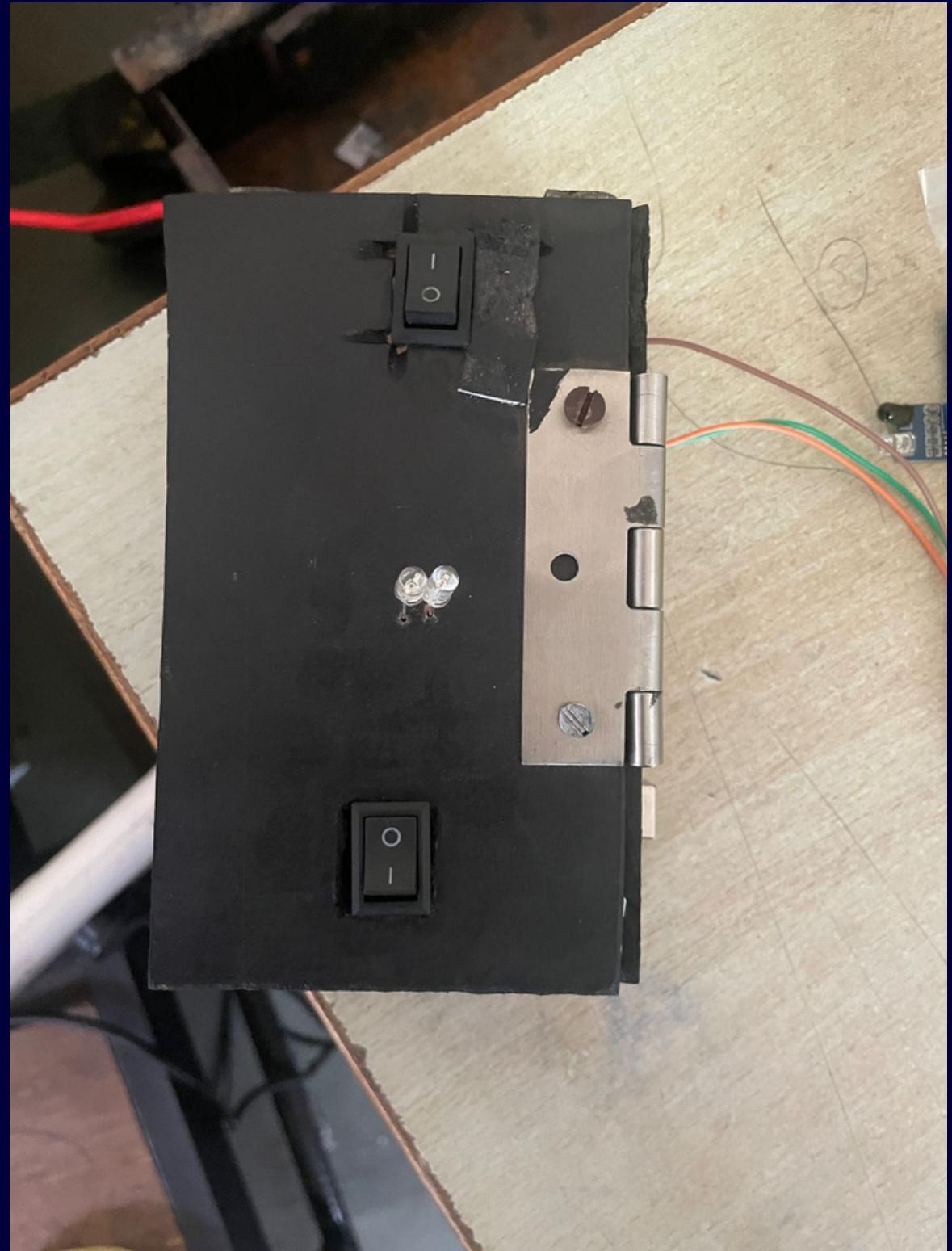
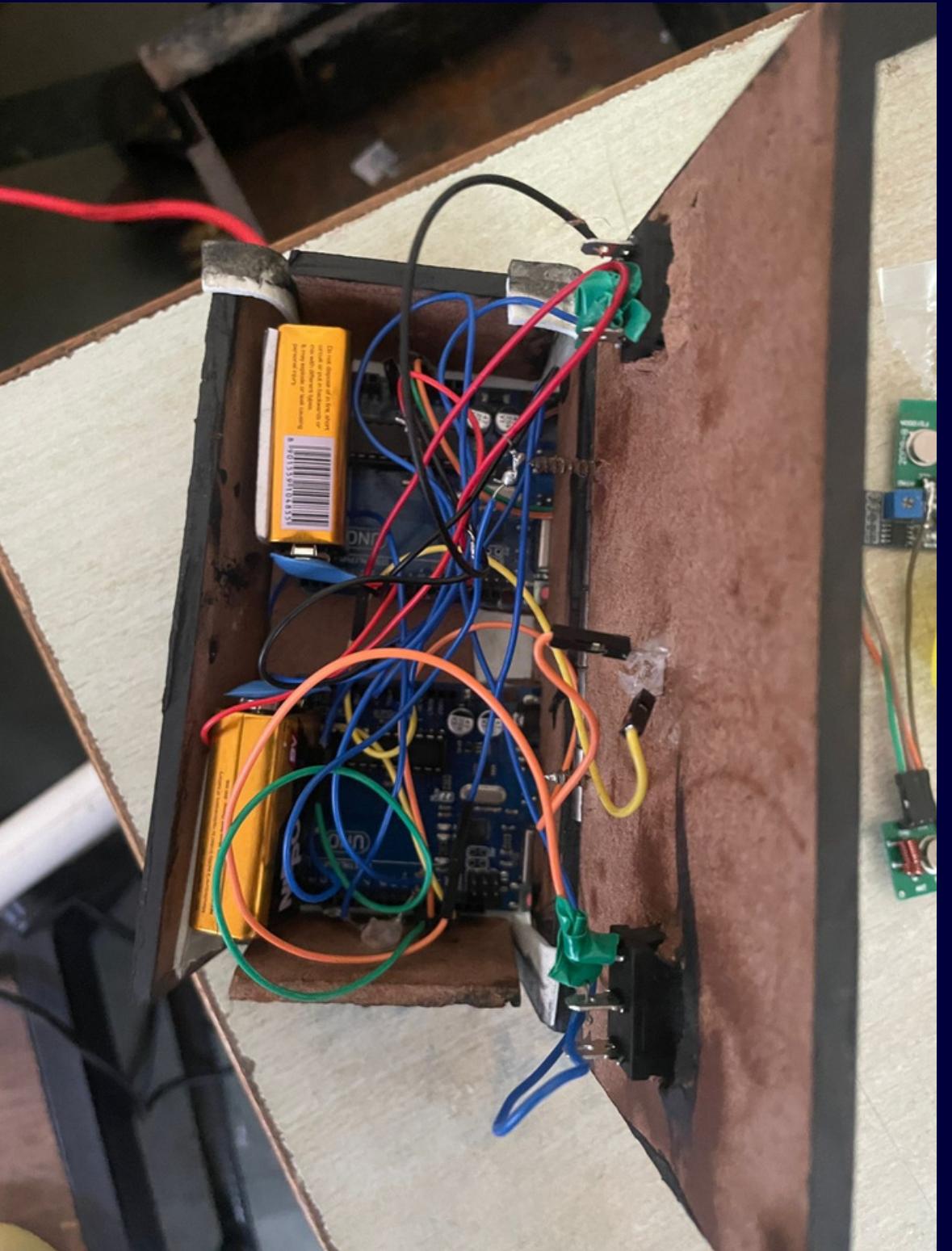
1 Arduino

2 FS100A Transmitter

3 Patch Antenna

4 Cables





Live Demonstration!