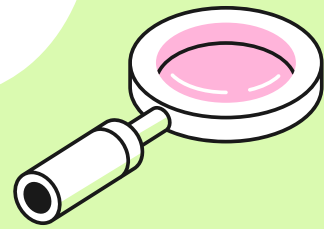


A radar speed gun (also radar gun and speed trap gun) is a device used to measure the speed of moving objects. It is used in law-enforcement to measure the speed of moving vehicles and is often used in professional spectator sport, for things such as the measurement of bowling speeds in cricket, speed of pitched baseballs, and speed of tennis serves.

A radar speed gun is a Doppler radar unit that may be hand-held, vehicle-mounted or static. It measures the speed of the objects at which it is pointed by detecting a change in frequency of the returned radar signal caused by the Doppler effect, whereby the frequency of the returned signal is increased in proportion to the object's speed of approach if the object is approaching, and lowered if the object is receding. Such devices are frequently used for speed limit enforcement, although more modern LIDAR speed gun instruments, which use pulsed laser light instead of radar, began to replace radar guns during the first decade of the twenty-first century, because of limitations associated with small radar systems.



# INTRODUCTION



WHILE DRIVING ON HIGHWAYS, MOTORISTS SHOULD NOT EXCEED THE MAXIMUM SPEED LIMIT PERMITTED FOR THEIR VEHICLE.

HOWEVER, THE ACCIDENTS KEEP OCCURRING DUE TO SPEED VIOLATION.

SINCE THE DRIVERS TEND TO IGNORE THEIR SPEEDOMETERS.

THE SPEED CHECKER WILL COME HANDY FOR THE HIGHWAY TRAFFIC POLICE AS IT WILL NOT ONLY PROVIDE A DIGITAL DISPLAY IN ACCORDANCE WITH A VEHICLE SPEED BUT ALSO SOUND AN ALARM IF THE VEHICLE EXCEEDS THE PERMISSABLE SPEED FOR THE HIGHWAY



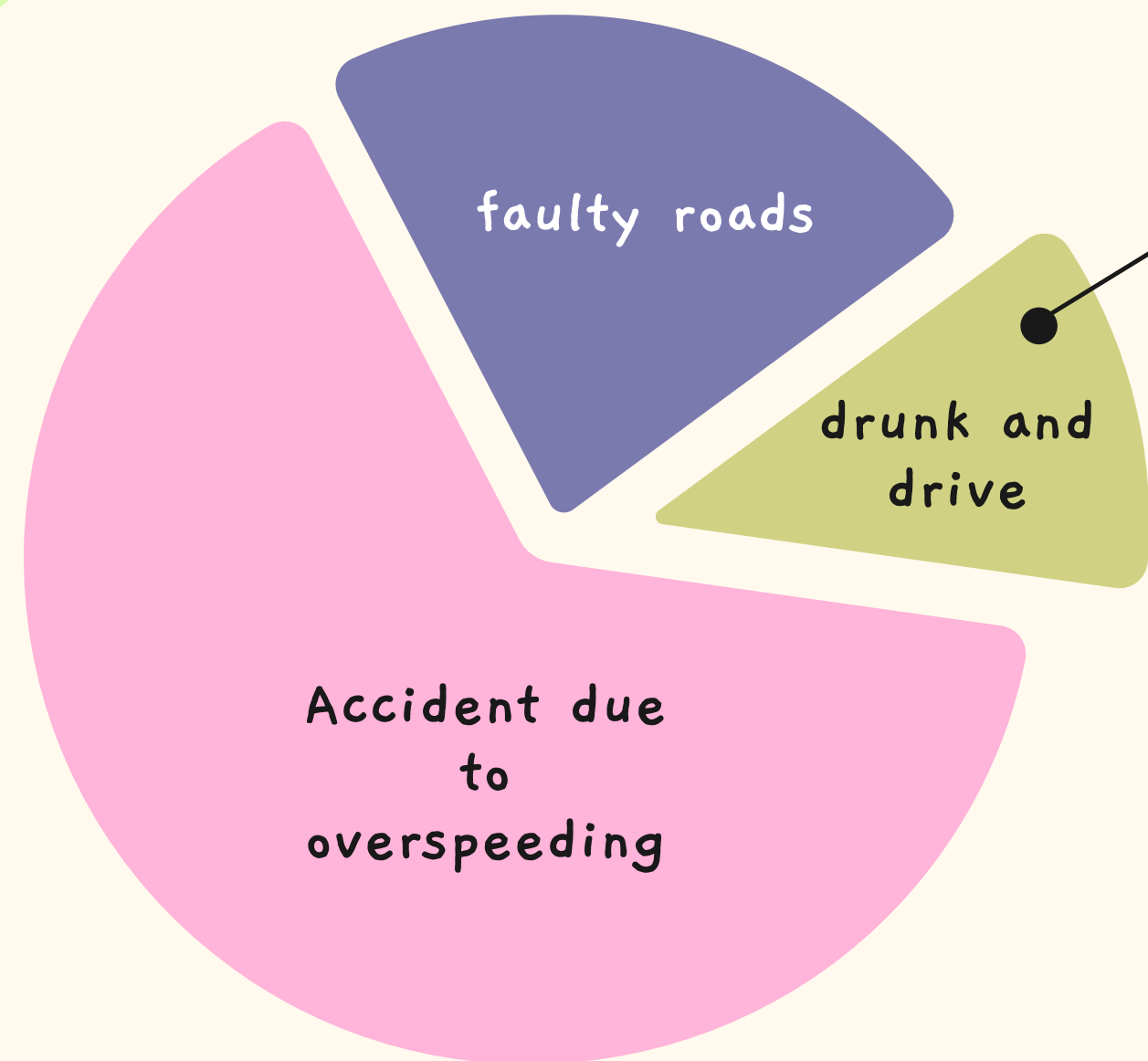
# INTELLIGENT TRAFFIC SYSTEM CONNECTIVITY

## Doppler effect

Speed guns use Doppler radar to perform speed measurements.

Radar speed guns, like other types of radar, consist of a radio transmitter and receiver. They send out a radio signal in a narrow beam, then receive the same signal back after it bounces off the target object. Due to a phenomenon called the Doppler effect, if the object is moving toward or away from the gun, the frequency of the reflected radio waves when they come back is different from the transmitted waves. When the object is approaching the radar, the frequency of the return waves is higher than the transmitted waves when the object is moving away, the frequency is lower. From that difference, the radar speed gun can calculate the speed of the object from which the waves have been bounced.





# TYPES OF ROAD ACCIDENTS IN INDIA



## **WHY WE USE AN AVERAGE SPEED CAMERA SYSTEM**

Average speed cameras help to make roads safer by encouraging drivers to maintain a consistent speed limit

Average speed cameras are one example of new intelligent transport systems. the information collected by cameras is used to make our roads safer

The average speed camera system has been installed to ensure compliance with the reduced temporary 40mph speed limit

1

## **FUTURE TECHNOLOGIES**

A speed camera designed to catch speeding motorists .

Can also note the number plates and recognise cars with out-of-date tax discs and no insurance.

2

## **ADVANTAGES OF SPEED CAMERA**

Speed costs lives  
Economic benefit  
Good for environment  
High speed is bad for communities and other type of exercise

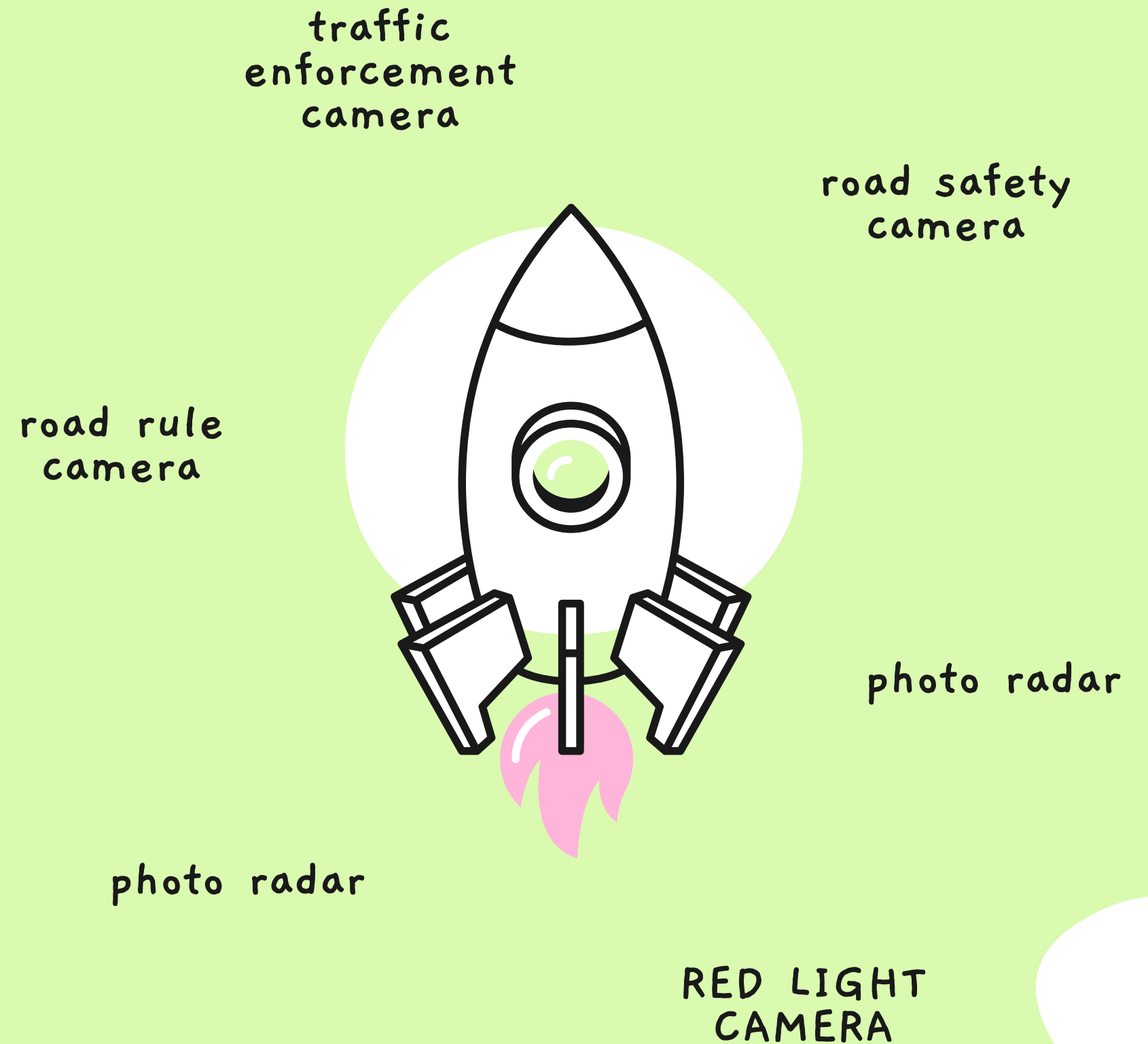




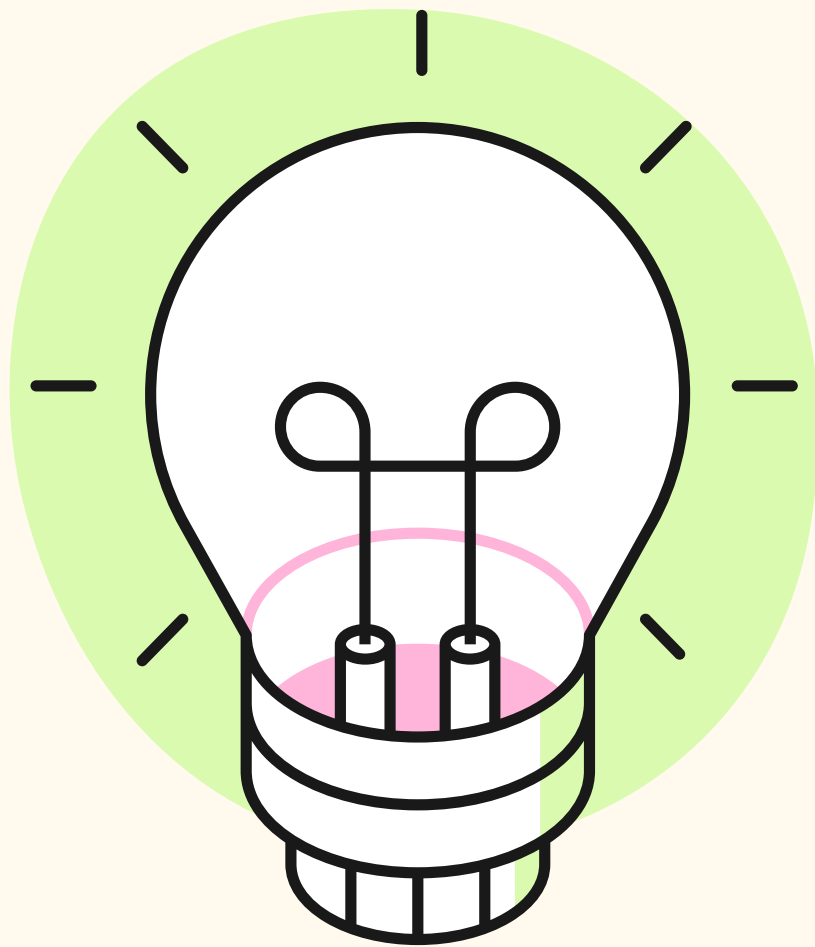


# DIFFERENT NAMES OF SPEED CAMERAS

speed cameras were introduced in west London in 1992  
speed camera also know as safety camera  
The basic principle behind speed camera is DOPPLER EFFECT and RADAR TECHNOLOGIES







## **CONCLUSION**

A new approach for vehicle extraction and speed detection was proposed

These cameras reduces accidents and protects the innocent road users

The system also provides location and velocity information for each vehicle as long as it is visible



**TEAM HACKERS**

**THANK  
YOU**

PRESENTATION BY  
TEAM HACKERS

