

The background of the slide features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the left and right sides of the slide, framing the central text area. The overall design is modern and clean.

Smart Helmet Integration for Alcohol Detection and Safety Compliance in Motorbikes

PRESENTATION OVERVIEW

- Objective of the Project
- Existing system
 - Block Diagram / Circuit Diagram of existing system
 - Disadvantages of existing system
- Proposed system
 - Block diagram / Circuit Diagram of proposed system
 - Advantages of proposed system over Existing System
- List of Components used with Images & Cost
- References

OBJECTIVE OF THE PROJECT

Enhance Rider Safety: Implement a system that ensures the bike engine only starts when the rider is wearing a helmet, reducing the risk of head injuries in accidents.

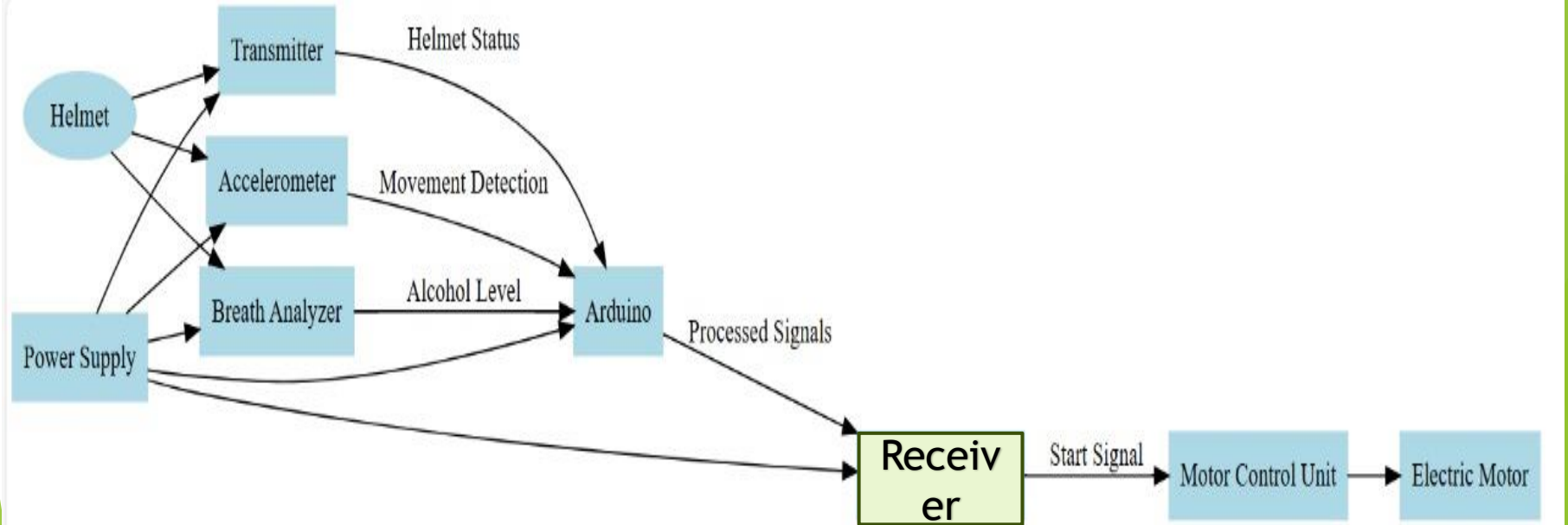
Prevent Drunk Driving: Integrate a breath analyzer into the helmet to measure the rider's alcohol level, preventing the bike from starting if the rider is intoxicated.

Automate Safety Compliance: Create an automated system that enforces helmet usage and sobriety checks without the need for external monitoring.



Reduce Road Accidents: Contribute to reducing the number of road accidents caused by not wearing helmets or driving under the influence of alcohol.



PROPOSED SYSTEM

BLOCK DIAGRAM



LIST OF COMPONENTS USED IN THE PROJECT

S.NO	Name of the component	Image of Component	Unit Cost (Rs)
1	ACCELEROMETER (MPU 6050)		115
2	BREATH ANALZSER(MQ3)		80

S.N O	Name of the component	Image of Component	Unit Cost (Rs)
3	HELMET		600
4	ARDUINO		500

ADVANTAGES OF PROPOSED SYSTEM

Helmet Enforcement: Automatically ensures the rider is wearing a helmet before starting the vehicle.

Alcohol Detection: Prevents the vehicle from starting if the rider is intoxicated.

Movement Detection: Uses accelerometer data to detect curves and automatically turn off the vehicle if needed.

Automated Safety Checks: Integrates multiple safety checks (helmet, alcohol level, movement) in an automated system.

Enhanced Rider Protection: Provides additional safety features that traditional systems lack, reducing accident risks.

Arduino Integration: Uses Arduino for real-time processing and decision-making to enhance system reliability and functionality.

DISADVANTAGES OF EXISTING SYSTEM

No Helmet Enforcement: Riders can start the bike without wearing a helmet, increasing injury risk.

No Alcohol Detection: The system doesn't check if the rider is intoxicated, allowing unsafe riding.

Lack of Automated Safety Compliance: Safety measures depend entirely on the rider's discretion.

Higher Accident Risk: The absence of safety checks leads to a greater chance of accidents.

No Preventive Safety Measures: The system doesn't prevent the bike from starting under unsafe conditions.

REFERENCES

1. https://www.irjmets.com/uploadedfiles/paper/volume2/issue_7_july_2020/2160/1628083075.pdf
2. https://www.researchgate.net/publication/323567269_Accident_and_alcohol_detection_in_bluetooth_enabled_smart_helmets_for_motorbikes

The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern, layered effect on the right side of the slide.

THANK YOU