Slide 1-

Good morning respected judges, teachers, and fellow participants.

I am Aditya Awari, a student of Indira National School, and today, I am excited to present my project titled ‘Vehicle Crash Detection System’.

This project has been a journey of learning, experimentation, and innovation, and I feel honored to share it with you all.

I would also like to take this opportunity to express my gratitude to my mentor and guide, Ms. Sonam L., who has constantly supported and encouraged me throughout this process.

In the next few minutes, I will take you through the story behind this project, its working mechanism, the technologies used, and most importantly, the impact it has.

Let’s begin.

Slide 2-

Before we begin, I’d like you to take a moment to watch this short clip.

[clip]

Scenes like these happen every single day — on highways, in cities, in rural areas. For a moment, imagine being there: the sound of the crash, the panic, the confusion. Sometimes, people rush to help, but often… no one knows who to call or how quickly help can arrive.

This is not just a statistic; it’s a reality that affects millions of families every year. And the question that always struck me was — can technology do more?

In the next few slides, we’ll dive deeper into this issue and understand why finding an innovative solution is no longer just an option, but a necessity.

Slide 3-

AI, Machine Learning, and Data Science are changing safety, healthcare, and community welfare.

Yet, road accidents are still a leading cause of death worldwide.

Most deaths happen because help doesn’t reach in time.

With technology, we now have the chance to detect crashes faster and save lives

Slide 4-

AI is not just about technology; it’s about solving real-world problems.

In the 21st century, AI-driven solutions are helping improve social and community well-being — from smarter healthcare to faster emergency responses.

My project follows the same vision: using AI to make our roads safer and save lives.

Slide 6-

This is my project — the Vehicle Crash Detection System.

It works by monitoring speed, tracking location, and analyzing movement patterns, etc.

What makes it smarter is its ability to integrate public data like signal cameras or road sensors in the future.

The moment a crash is detected, it can send instant alerts and call for help, reducing response time and saving lives

Slide 7-

Every year, over 1.3 million people die in road accidents worldwide.

One major reason is delayed crash detection, which means slower emergency response.

Faster detection means faster help — and more lives saved.

Slide 8-

Our solution uses AI and Machine Learning to detect crashes in real time.

It analyses sudden changes in speed or movement to identify accidents.

The system then generates instant alerts, enabling faster emergency responses.

The goal is simple — save lives by saving those critical minutes.

Slide 9-

Here’s how the system works:

First, it collects data — vehicle speed, motion, sensor inputs, and even camera data.

Second, our AI and Machine Learning model analyzes sudden changes like acceleration, deceleration, or impact.

Third, if a crash is detected, the system triggers an alert and checks traffic conditions using live location.

Fourth, it can also monitor drowsiness to prevent accidents.

And finally, it sends details to authorities for a quick emergency response.

Slide 10-

Our system has several key features:

Real-time crash detection using AI and Machine Learning.

Automatic emergency alerts to authorities and emergency contacts

Faster response times, which means more lives saved.

Scalable and adaptable for smart vehicles and smart cities.

Data-driven insights to improve overall traffic safety.

And even drowsiness detection to prevent crashes before they happen.

Slide 11-

This system has a significant impact on society. It saves lives by enabling faster emergency response, reducing accident fatalities through early crash detection, and helping authorities and hospitals act quickly. Ultimately, it improves overall road safety for drivers and passengers.

Furthermore, this project aligns with the mission of using AI for social wellbeing. By leveraging advanced technologies, we can build solutions that protect human life and enhance community welfare.

(Transition to demo) Now, let me demonstrate how this Vehicle Crash Detection System works.

Here are catchy, short scripts for each slide:

S1 - Impact on Society Script

\*"Imagine if we could turn every car crash from a tragedy into a rescue mission. Our Vehicle Crash Detection System doesn't just detect accidents - it \*\*races against time to save lives\*\*.

In those critical golden minutes after a crash, when every second counts, our AI becomes the silent guardian that alerts emergency services instantly. We're not just building technology - we're building hope for families and creating smarter, safer roads for everyone.

This isn't just about cars and sensors - it's about using AI as a force for good, transforming how we protect human lives on our roads.”

S2 - Conclusion Script

Ladies and gentlemen, what you've seen today is more than just a project - it's a \*\*life-saving revolution

Our AI-powered crash detection system proves that when we combine Data Science, Artificial Intelligence, and Machine Learning with genuine care for human welfare, we can create technology that truly matters.

We've shown that innovation isn't just about being smart - it's about being human. Every algorithm we write, every sensor we calibrate, brings us one step closer to a world where no accident goes unnoticed and \*\*no life is lost to delayed response"

Future Plans Script

\*"But we're just getting started! Picture this future with me:

🎯 Scikit-Learn integration for smarter crash predictions

👁️ OpenCV-powered drowsiness detection - stopping accidents before they happen

🗺️ Google Maps API for instant location tracking and traffic monitoring

📱 Twilio alerts reaching hospitals in real-time

🚗 Vehicle-to-Vehicle technology creating a connected safety network

We're not just building a crash detector - we're engineering a complete safety ecosystem where every vehicle becomes a guardian angel for others on the road. The future of road safety isn't coming -we're building it today!"

Slide 1 – Introduction

- Greeting and introduction (name, school).

- Project title: Vehicle Crash Detection System.

- Journey: learning, experimentation, innovation.

- Gratitude to mentor Ms. Sonam L.

- Roadmap: story, working, technologies, impact, and demo.

Slide 2 – The Problem (Hook)

- Real-world urgency: accidents happen every day.

- After a crash: confusion, delayed help, uncertainty.

- Core question: can technology bridge the gap?

- Why now: solving this is a necessity, not a choice.

Slide 3 – Context and Opportunity

- AI/ML/Data Science already transforming safety and healthcare.

- Road accidents: leading global cause of death.

- Biggest gap: delayed help reaching victims.

- Opportunity: faster detection → faster response → saved lives.

Slide 4 – Vision and Purpose

- AI is about real-world impact, not just tech.

- AI-driven solutions improve community well-being.

- This project fits that vision: safer roads, saved lives.

Slide 6 – What the System Is

- Monitors speed, location, and movement patterns.

- Designed to integrate with public data (signals, road sensors) in future.

- On detecting a crash: sends instant alerts and calls for help.

- Outcome: reduces response time, increases survival chances.

Slide 7 – Why It Matters (Data)

- 1.3 million+ deaths annually from road accidents.

- A key cause: delayed crash detection.

- Faster detection directly correlates with lives saved.

Slide 8 – Core Solution

- Real-time AI/ML detects sudden abnormal changes in motion.

- Identifies likely accidents quickly and reliably.

- Triggers instant alerts for quicker emergency response.

- Goal: save critical minutes that save lives.

Slide 9 – How It Works (Flow)

- Input: speed, motion sensors, GPS, optional camera data.

- Analysis: detect spikes/drops in acceleration/deceleration/impact.

- Decision: if crash likely → trigger alert; check live location/traffic.

- Prevention: optional drowsiness monitoring.

- Action: send details to authorities and emergency contacts.

Slide 10 – Key Features

- Real-time crash detection using AI/ML.

- Automatic emergency alerts and location sharing.

- Faster response times.

- Scalable to smart vehicles and smart city infrastructure.

- Data insights for traffic safety improvements.

- Drowsiness detection to prevent accidents.

Slide 11 – Impact and Transition

- Saves lives by shortening time to care.

- Helps authorities and hospitals act faster.

- Improves overall road safety for everyone.

- Aligned with AI for social good and community welfare.

- Transition: “Now, I’ll demonstrate how the system works.”