

The background is a dark green and black camouflage pattern. A semi-transparent dark grey rectangular box is centered horizontally and contains the title, tagline, and authors' names in white text. The title 'Xplora' is in a large, bold, sans-serif font. The tagline 'Unveiling the Unknown, Securing Every Step.' is in a smaller, regular sans-serif font. The authors' names are listed below the tagline in a regular sans-serif font.

# Xplora

Unveiling the Unknown, Securing Every Step.

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**BANG!**



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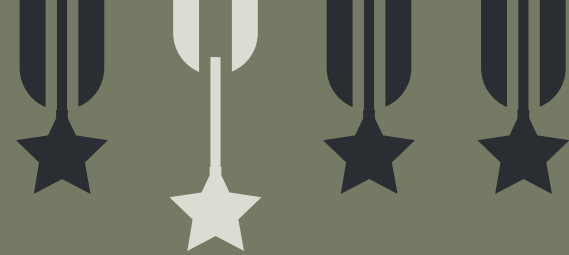




# INTRODUCTION

Landmines remain a hidden danger in many regions worldwide, threatening lives and hindering development. Detecting and clearing these mines is a crucial task but often involves high risks for human operators.





# PROBLEM STATEMENT



Landmines remain a persistent global threat, with millions buried in over 60 countries, according to the Landmine Monitor. These explosives kill or injure nearly 15 people daily, most of whom are civilians, including children. Traditional detection methods are slow, expensive, and dangerous, requiring human operators to risk their lives. This calls for an innovative, autonomous solution to enhance safety and efficiency in landmine detection.





# PROPOSED SOLUTION



Xplora is a robotic system designed to safely detect landmines using a metal detection sensor. It operates autonomously, navigating through the terrain while identifying metallic objects buried underground. The robot is powered by an ARM microcontroller, which processes sensor data and controls its movement. This system enhances safety by reducing the need for humans to enter dangerous areas during mine detection tasks.





# CONCLUSION



The Landmine Detection Robot represents a significant step toward safer and more efficient landmine detection. By combining advanced technology and autonomous operation, it reduces human risk and accelerates the process of clearing hazardous areas. This project aims to contribute to a safer future, supporting efforts to protect lives and promote development in affected regions

