AI-POWERED SMART SURVEILLANCE SYSTEM

PROBLEM STATEMENT

Traditional surveillance systems rely on manual monitoring, leading to delays in threat detection and response. AI-powered surveillance aims to address these challenges by enabling real-time, automated monitoring, reducing human intervention while improving security and accuracy.

ABSTRACT

This project focuses on developing an AI-powered surveillance system that utilizes advanced machine learning, computer vision, and IoT technologies. The system enhances security by automating anomaly detection, facial recognition, and real-time alerts. Future enhancements include predictive analytics, IoT sensor integration, and cloud-based remote monitoring.

INTRODUCTION

AI-powered surveillance systems leverage deep learning and IoT technologies to provide automated, real-time security monitoring. They detect suspicious activities, recognize faces, and send instant alerts, reducing the need for manual supervision. This system can be applied in smart cities, industries, and public safety.
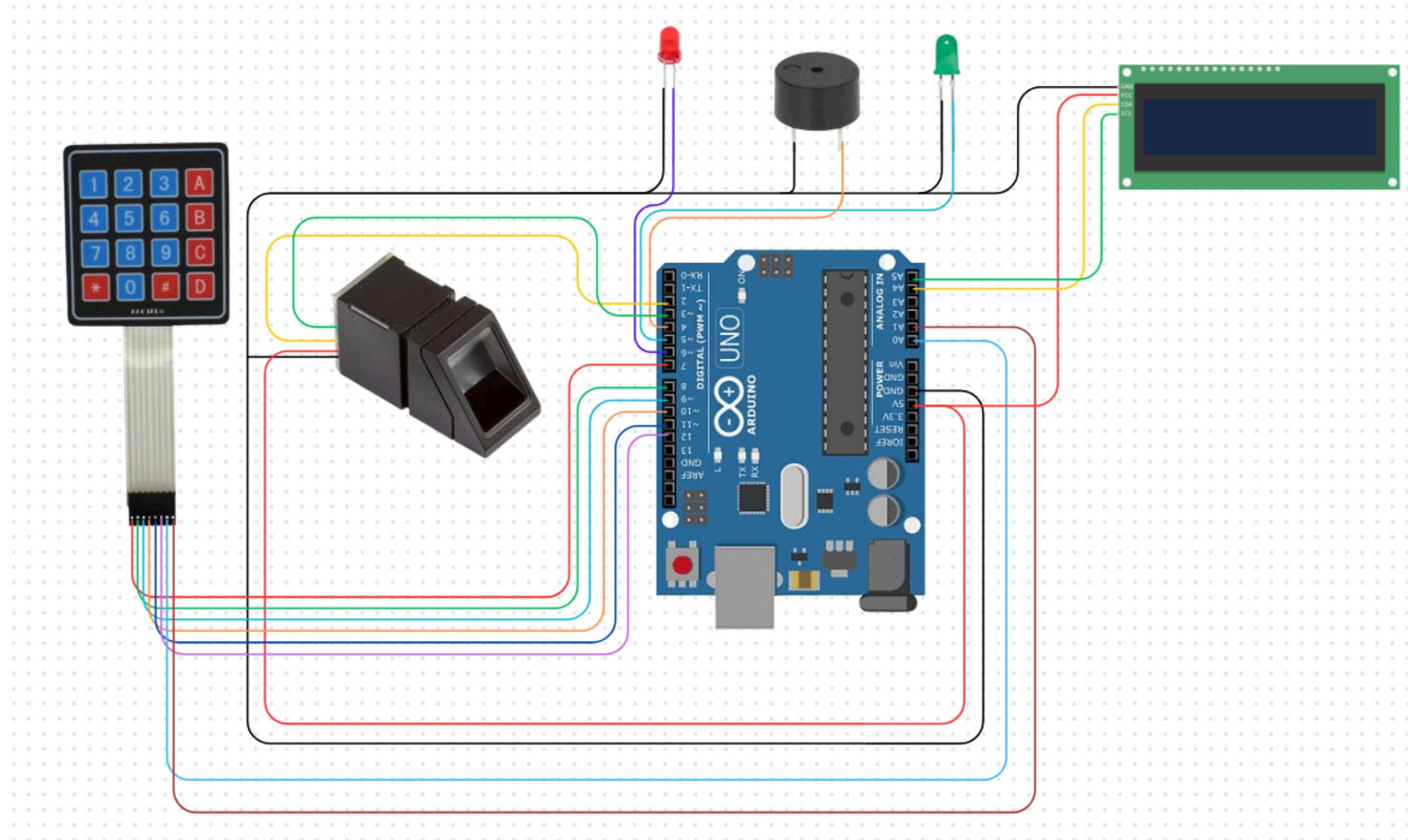
KEY FEATURE

- AI-Based Object Detection and Facial Recognition
- Real-Time Monitoring and Anomaly Detection
- Edge Computing for Low Latency Processing
- Secure Cloud Storage for Surveillance Data
- IoT Integration for Enhanced Security
- Remote Access via Mobile and Web Applications

BLOCK DIAGRAM
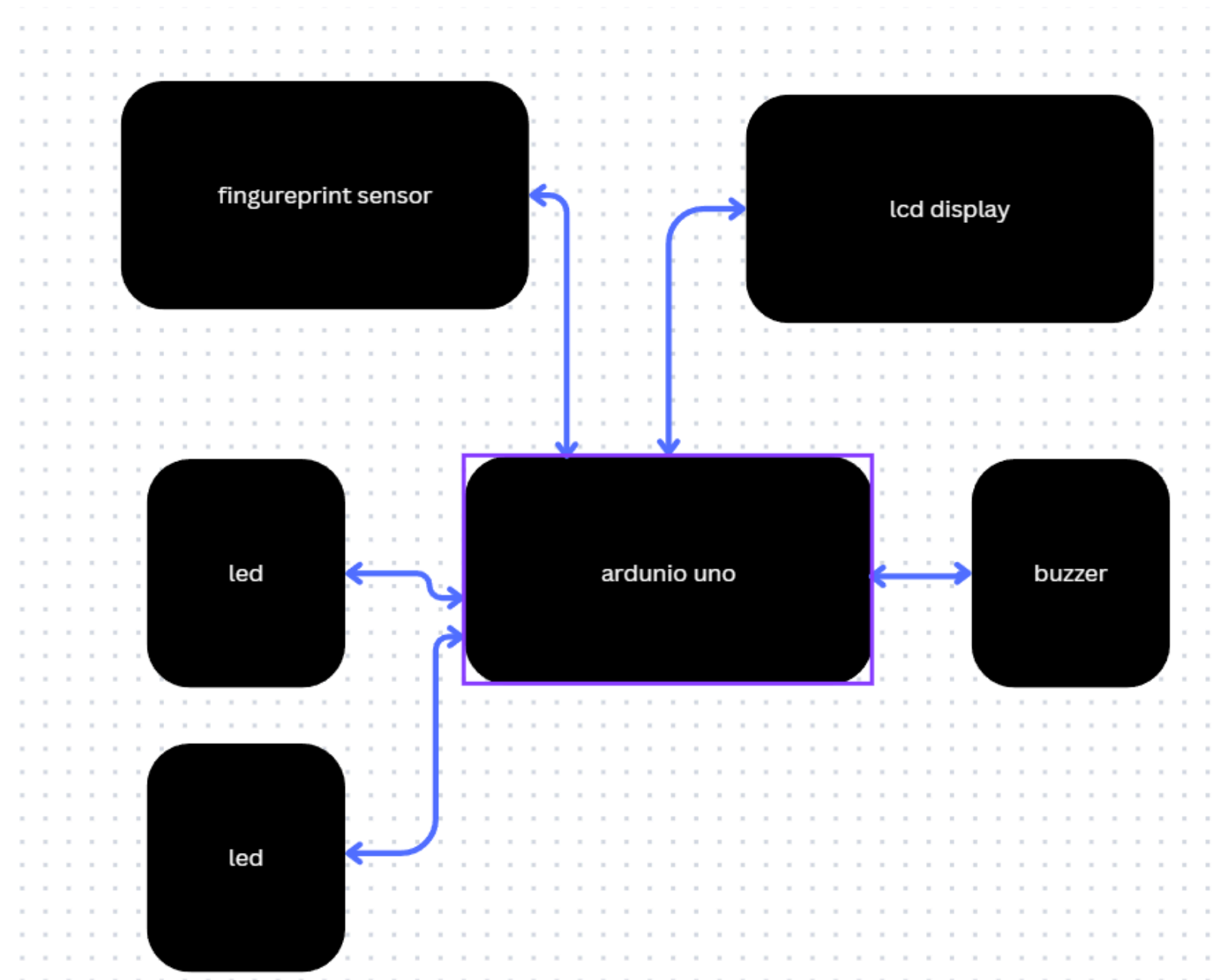
CIRCUIT DIAGRAM

USE CASE

- Public Safety & Law Enforcement
- Smart City Surveillance & Traffic Monitoring
- Industrial & Corporate Security
- Home & Commercial Security
- Automated Threat Detection in Restricted Areas

OUTCOME

- •Real-time, AI-powered threat detection and monitoring
- Improved security with automated alerts
- Reduced human intervention in surveillance tasks
- Scalable and adaptable for various environments
- Enhanced privacy and data security measures

CONCLUSION

The AI-powered smart surveillance system is an advanced security solution that leverages AI, IoT, and cloud computing for real-time monitoring. With continuous improvements, this technology will enhance security in public spaces, industries, and smart cities, reducing crime and improving response times.