IoT Surveillance + Security Machine

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Context

What are we solving?

Smart Security Cameras and Locks

A smart doorbell is a connected device that merges traditional doorbell functionality with modern security and communication features.

- Real-time video w/device live-streaming
- Motion detection with alerts.

In other words, it allows homeowners to see visitors remotely while enhancing home security.

02

Problem

What are we solving?

Problem

Customizability

- Existing solutions don’t offer upgrades/customs components.
- Little room for additional features.

Environmental

- Being that you have a device outside the home, it’s a wasted opportunity not to share environmental details.
- Temperature, humidity and other insights can be specific to the weather outside your home.

Problem

THEFT

- These doorbells are highly sought after items. But they cost quite a bit.
- It’s right on the outside of your home waiting to be stolen and sold off for a quick buck.

GPS

- With a GPS you will be able to track it down even in the most dire situations.

03

Solution

How are we solving it?

User Needs

Homeowner:

- As a homeowner, I want to access live video feeds from my doorbell so I can verify the identity of visitors without opening the door.
- As a homeowner, I want to control my smart lock remotely to grant or deny entry, ensuring convenient and secure access management.
- As a homeowner, I want to monitor real-time environmental data (temperature, humidity, luminosity) near my entryway to better understand outdoor conditions.

Visitor:

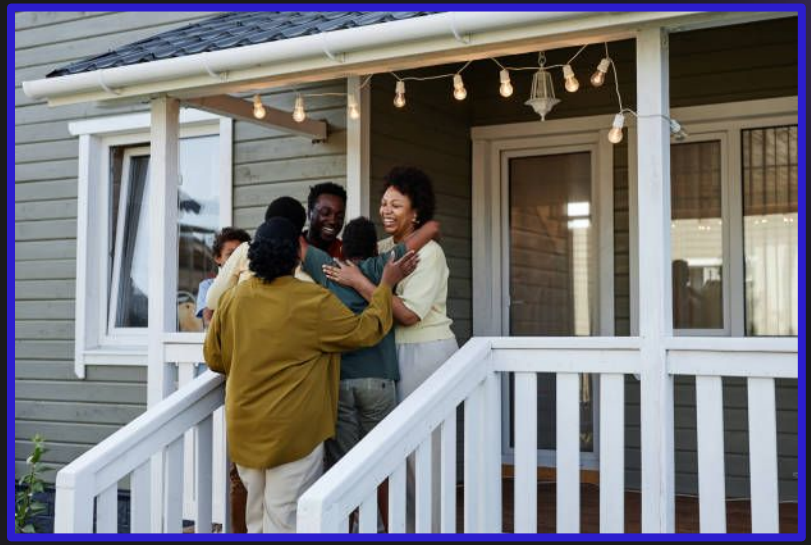
- As a visitor, I want to easily ring the doorbell and get a clear indication that my presence has been acknowledged.
- As a visitor, I want a seamless and secure process for gaining entry (e.g., temporary access codes or pre-authorized access) so I can enter the home without hassle.

Homeowner

The homeowner manages their home's entry system with seamless security and convenience. They need easy, secure access via a smart doorbell and lock while monitoring real-time environmental data (temperature, humidity, etc.) near the entry. This enables them to maintain a safe, comfortable home environment and quickly respond to any unusual changes.

Visitor

The visitor interacts with the home's entry system by easily using the smart doorbell. They need clear acknowledgement of their presence and a seamless, secure process for entry, ensuring a smooth and convenient visit.



Proposed Solution

The smart doorbell system will be fully automated for remote control by the homeowner. A homeowner still needs to oversee the system, ensuring occasional maintenance and manual intervention when necessary.

The smart doorbell, integrated with a remote-controlled smart lock, GPS, and environmental sensors, offers a comprehensive home security solution. Homeowners can allow access to partial functionality to visitors.

Surveillance

Devices

Component Name	Interface Type
Camera	USB
Motion Sensor	GPIO / I2C
GPS	GPIO / I2C

Environment

Devices

Component Name	Interface Type
Temperature Sensor	PIN
Luminosity Sensor	BUS
Humidity Sensor	PIN

Security Subsystem

Devices

Component Name	Interface Type
Lock	GPIO / I2C
Motor	PWM / GPIO