

Abstract

Security has become important part of our lives and with the new technology come new and modern ways to ensure the safety of an individual and their property. Our project tends to provide the means of a security system that can escort the person and provide the required protection not just for the belongings but for the persons welfare too. This is a birth of a new generation of security systems that can be portable.

Introduction

The system's portability gives to our product the unique feature above all the other stationary security systems. It is an innovative approach that provide security anywhere and everywhere and thus the name portable security system.

The project aims to provide security system using Raspberry Pi 4 and a small camera. The system provides a full audio and video livestreaming of the event. Whenever a motion is detected, pictures are taken and saved to the database and the app will give the user the choice to dial authorities in such a case.

Project Goals

Developing a proof of concept anti-theft IOT device, that later evolved into implementing a specific service, while also distinguishing itself from the current market landscape and bringing a new perspective on personal monitor and security.

Methods and Tools



End to end connection with the mic, and camera on Raspberry Pi 4

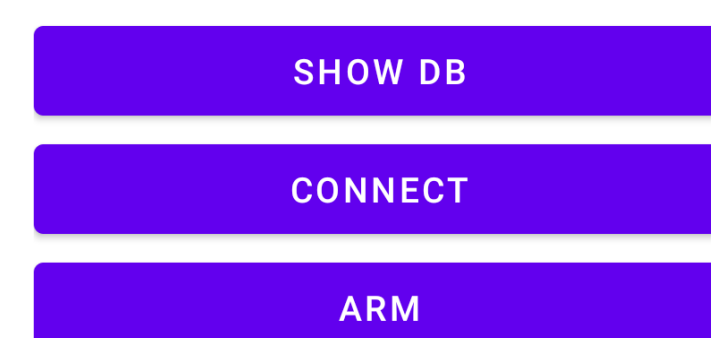
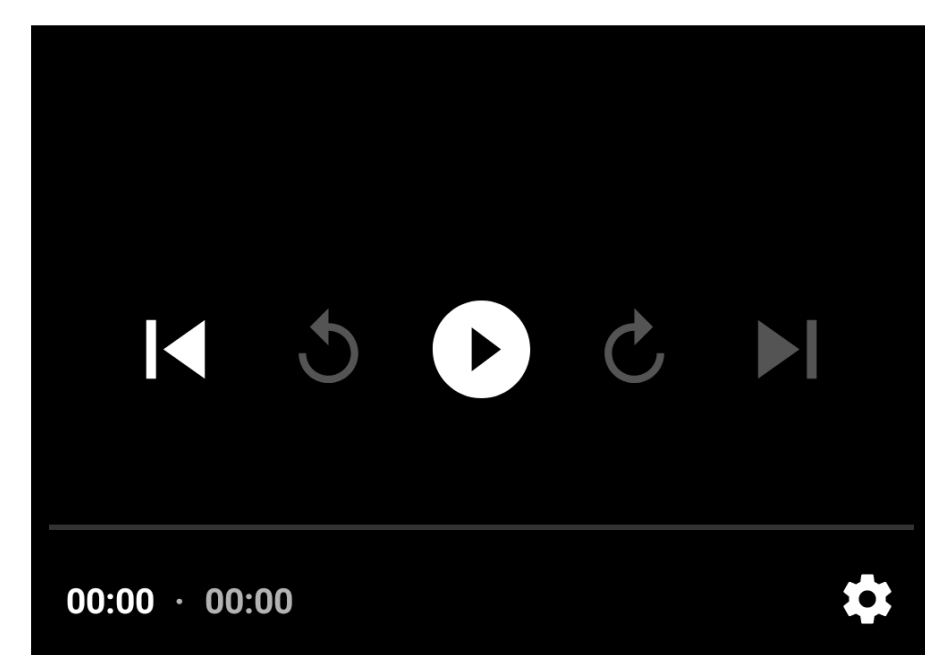


nv-websocket-client
websockets
Picasso
PrettyTime
Gson
Volley

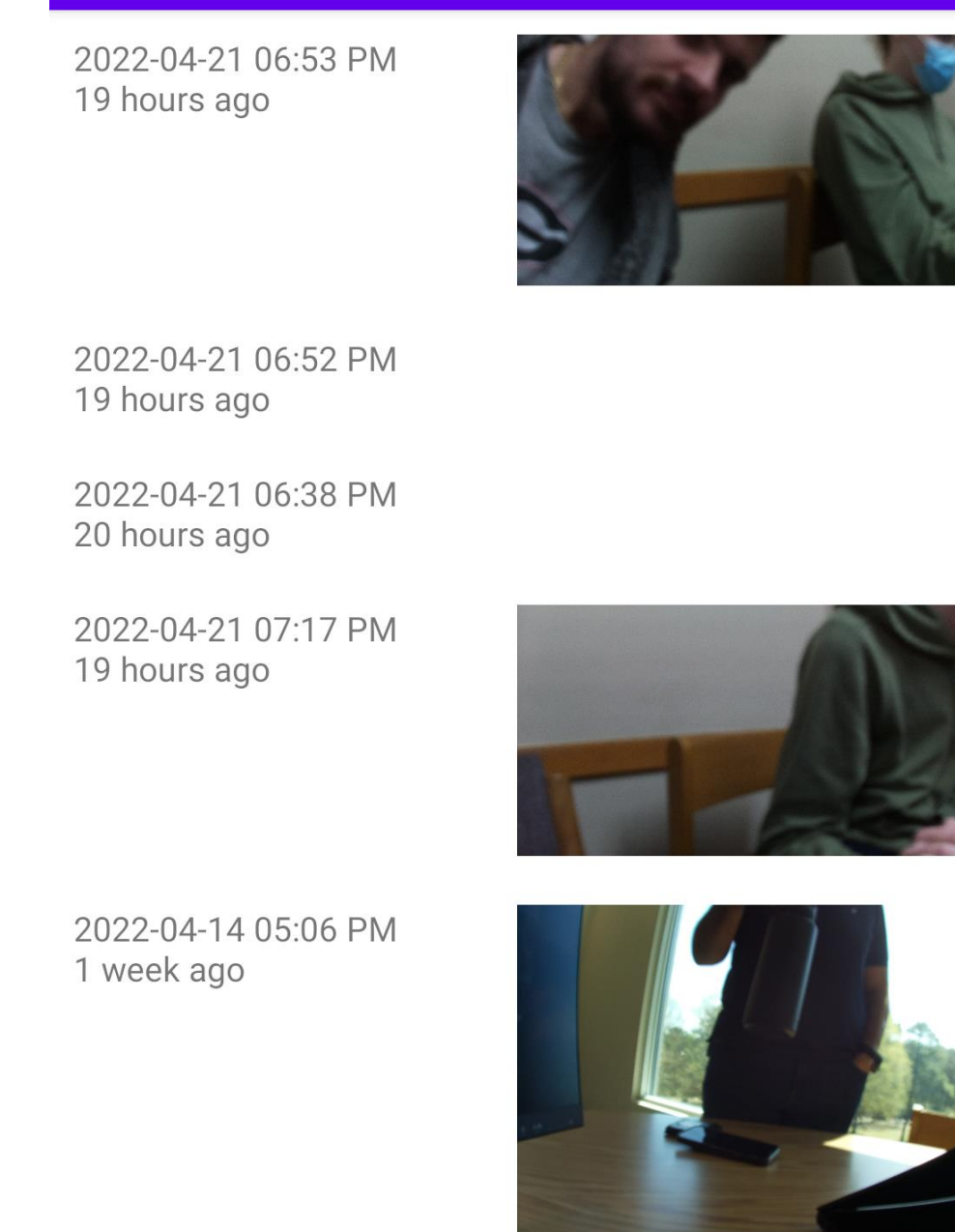
ExoPlayer
Nginx

Implemented Features

Live feed from the camera



Displays past events



Dials an emergency number for the user when an event is detected at the push of a button

Conclusions

In conclusion, this project can be the seed for a whole new series of security cameras that can open a new door to future portable security cameras. Our prototype can have more new features built into it; the database can be improved to be able to save the live stream as well as the photos from the camera; some aesthetic features will provide the project with better look also.

Acknowledgments

We would like to express our gratitude to our professor and mentor Dr Ken Hoganson for his feedback, critique, and pushing us in a direction to be able to innovate and create this device using a collection of our skills. Lastly, thank you every member in this group for contributing, showing up when needed, and working through the challenges this project presented.

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