

User Manual

FireWatch Community

Beta Version

Date: October 8, 2023

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1 Introduction

In a world increasingly affected by extreme weather events, rapid detection and response to emergency situations, such as forest fires, have become essential for community safety and environmental preservation. We introduce an innovative application designed to offer a proactive and effective approach in the fight against forest fires.

Our application, named "FireWatch Community", is a comprehensive tool that merges advanced technology with citizen participation to detect and report fires in real-time. Moreover, FireGuard stands out due to its image analysis capability based on artificial intelligence, ensuring greater accuracy in fire identification and minimizing false alarms.

Highlighted Features:

- **Real-Time Fire Detection:** FireWatch Community employs a network of sensors and cameras strategically located in areas prone to fires. Upon detecting smoke, high temperatures, or fire signs, the application instantly alerts local authorities and nearby users
- **Artificial Intelligence for Image Analysis:** Users can capture photos of potential fires and upload them to the application. Our specialized AI scrutinizes the images to ascertain the presence of fire, identifying patterns of smoke, flames, and affected areas.
- **Notifications and Custom Alerts:** FireWatch Community keeps users informed in real-time through instant notifications. Additionally, it provides the option to receive customized alerts based on the user's location and preferences.
- **Intuitive User Interface:** The application is designed to be user-friendly, enabling anyone, regardless of their technical experience, to contribute to fire detection and community safety
- **Collaboration with Authorities:** FireWatch Community integrates with local and regional emergency services for a coordinated and swift response to fire incidents. It facilitates communication and the exchange of critical information.

The safety of our community and the protection of our natural environment are paramount. FireWatch Community is not only an early warning tool in the fight against wildfires but also an example of how technology can join forces with citizen action to address the current challenges of climate change and public safety.

Join us in this mission of wildfire prevention and rapid response. With FireWatch Community, we are one step closer to a safer and more sustainable world.

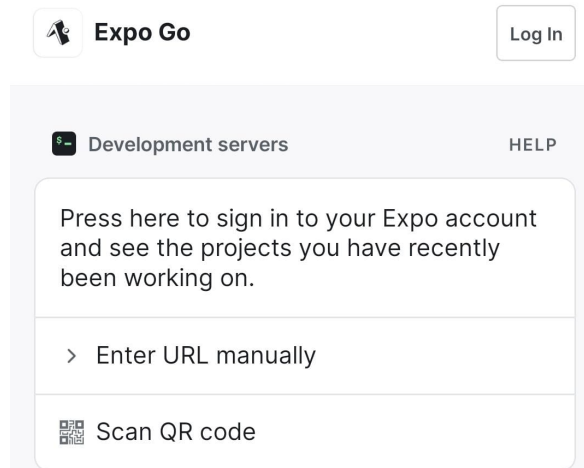
2 Instructions for Use

1. Download the mobile application "Expo Go"

available on Google Play



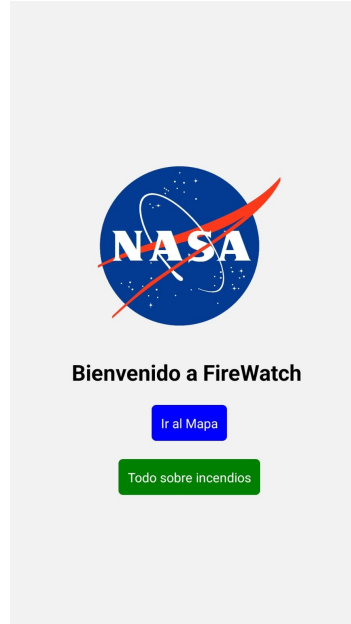
2. A QR code scan is required to access the subsequent application. This can be done from the following menu:



Select 'Scan QR manually' to activate the camera for scanning the following QR code.

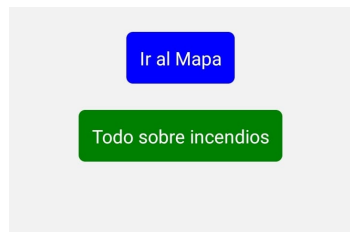


3. After scanning the code, you'll be directed to our application's main page:

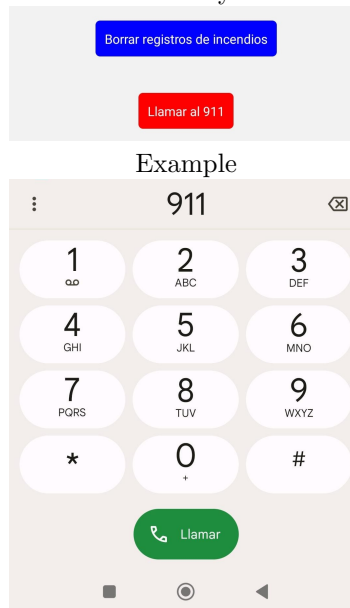


3 Features

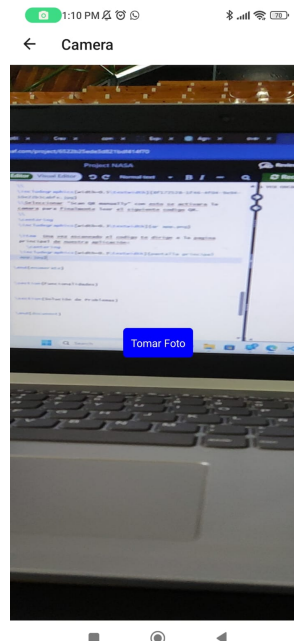
1. main Screen: The functions found on the main screen consist of two buttons, one that takes us to the screen where the map is located, and the other leads to an infographic we created online to inform people about fires



2. Map: This screen contains two buttons, one of which is responsible for scanning the marked locations. The other button is an alert button that takes you to the dialer app with the number 911 already set



3. Taking a Photograph When selecting a location, the camera is automatically activated:



This screen contains only one button that will take a photograph and save it for analysis with our AI to verify if it is indeed a fire. This is to prevent false alarms

4 Troubleshooting

FireWatch Community addresses an issue related to fire detection and reporting. In particular, it addresses the following aspects:

- **Fire Detection:** FireWatch Community allows users to mark the location of a fire on a map, making early detection of wildfires or similar incidents easier.
- **Alerting Authorities:** Once a user marks the location of a fire on the map, the application automatically alerts local authorities about the incident. This speeds up the emergency response and can help minimize the damage caused by the fire.
- **Artificial Intelligence (AI) for Image Analysis:** FireWatch Community includes an AI feature that allows users to take photos of the fire area. The AI analyzes these images to determine if it is indeed a fire, improving accuracy and reducing false alarms.
- **Identification of Critical Areas:** FireWatch Community calculates and creates circles on the map based on the location of reported incidents. If an area accumulates enough reports within a period of time, an alert is triggered to warn users about the severity of the situation in that area.
- **Emergency Call:** FireWatch Community allows users to make an emergency call to the number 911 directly from the application, further expediting the response to critical situations.

FireWatch Community addresses a significant issue related to the detection and rapid response to wildfires and other similar incidents, utilizing advanced technology, citizen participation, and artificial intelligence to enhance community safety and environmental protection.