



Theft User Manual

A User Manual for Theft - Bluetooth-Enabled Theft and Collision Detection Device for Vehicles.

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1 Abstract

Thieft is a Bluetooth Enabled Anti-Theft device for vehicles. The device incorporates a Raspberry Pi, Accelerometer and GPS. The Raspberry Pi has built-in bluetooth connectivity, which allows us to detect if the owner of the vehicle's phone is in range. The accelerometer allows us to tell if the vehicle is moving. If the user's phone is not in range of the device, an SMS alert will be sent to the owner that will provide the location of the vehicle.

2 Installation

2.1 Raspberry Pi

Dependencies;

- ppp
- minicom
- python3
- python3-smbus
- python-pip
- crontab

PIP Dependencies:

- pybluez
- mpu6050-raspberrypi

Step 1

After cloning the project, add the src/raspberryPiCode directory to the raspberry pi and open the directory.

```
chmod 755 launcher.sh
```

this gives the launcher script root permissions if not already set. launching the launcher.sh from now on should run the program

Step 2

If you wish to have the Theft detection run on device startup we recommend creating a logs directory using;

```
mkdir logs
```

This is to keep track of any logs or incidents that may occur.

Step 3

```
@reboot sh /path/to/launcher.sh >/path/to/logs/directory/logs/cronlog  
2>&1
```

this will create a cronlog file on next start up and will keep track how the project is running

2.2 Server

Dependencies:

- python3
- npm
- nodejs

PIP Dependencies:

- django

Step 1

Running the server requires having all the above dependencies installed. You can change directory into the src/thieft/frontend/ and run npm i to install the node models required for the server

Step 2

After installing the node modules you can run npm run build to build the static files that will be used by django to run the web server.

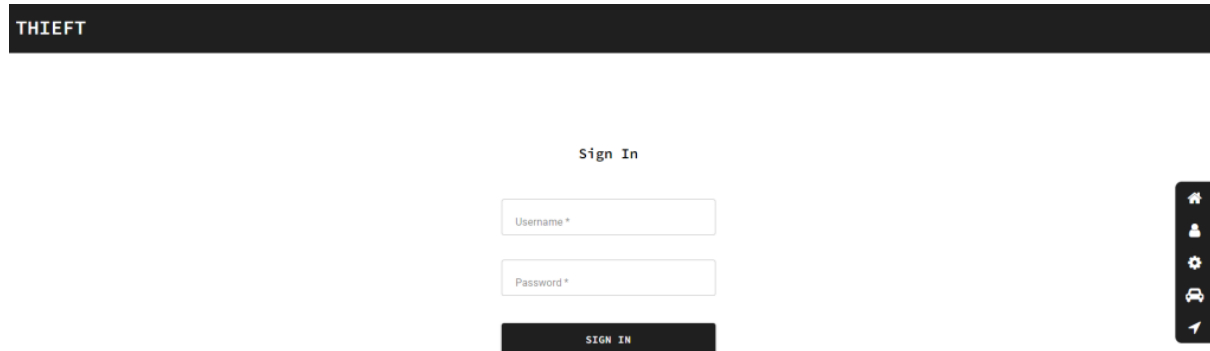
Step 3

Once the build script has finished you can change directory back into the theft directory and run

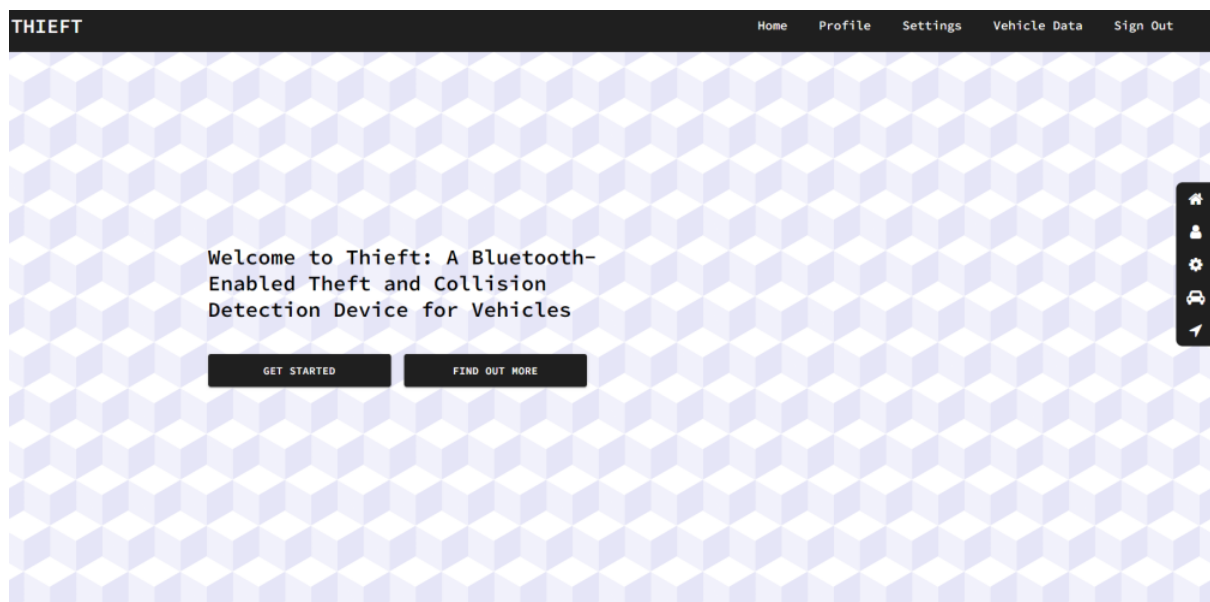
```
python manage.py runserver
```

3 User Guide

Upon installation, when you run Thief for the first time you will be brought to the sign in page. Here you will be asked to sign in using the username and password associated with your device.



Once you have signed in, you will be brought to the homepage, where you will be able to navigate to any part of the application. Upon first login, a user should select the “get started” button which will bring them to the tutorial page.



The tutorial page consists of very simple instructions that will direct the user to the page they need to add their information to. The first step to getting started with Thief is to add your phone number (required for receiving alerts) to the profile page.

Getting Started

Step 1:

Fill out the required information (phone number *) on the [Profile](#) page.

Step 2:

Add a bluetooth device to your authenticated devices list on the [Devices](#) page.

Step 3:

That's it! You are now ready to receive alerts!



Once you have added a phone number, you should receive an alert on your phone that you have successfully added your information correctly.

First Name	John
Last Name	Smith
Phone *	PhoneNumber
Address	Dublin
City	Dublin
Country	Ireland

UPDATE PROFILE



Once this step is completed, it's time to follow step two and head over to the devices page, where you will add one or more bluetooth devices of your choosing. Please make sure that your device has bluetooth enabled and is within range.

THIEFT

HomeProfileSettingsVehicle DataSign Out

Bluetooth Devices

Add Device*

Adds device to authenticated bluetooth devices list

UPDATE BLUETOOTH DEVICES

Thieft Devices

0

Add Device ID *

Adds device to authenticated devices list

UPDATE DEVICES

Here you can also add another theft device to your account, which can be useful if you would like to receive alerts for more than one vehicle. If you would like to change any of your security settings, such as your username or password, you should go to the settings page via the settings heading in the navigation bar, or by clicking on the settings icon in the sidebar.

THIEFT

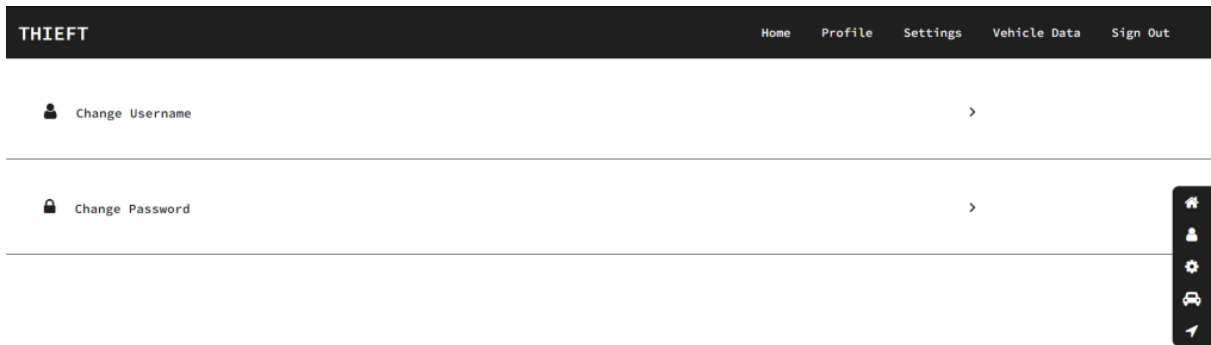
HomeProfileSettingsVehicle DataSign Out

Sign In & Security

>

Manage Devices

>



Changing username allows you to change your username, which will keep all the information you have provided and transfer it to an account associated with your new username.

The image shows the "Change Username" form within the application. The form is centered on a light grey background. It has a title "Change Username" at the top. Below the title are three input fields: "New Username *", "Confirm Username *", and "Password *". At the bottom of the form is a dark grey button with the text "CHANGE USERNAME" in white. The navigation bar and sidebar from the previous image are also visible in the background.

Change password allows you to change your password.

Change Password

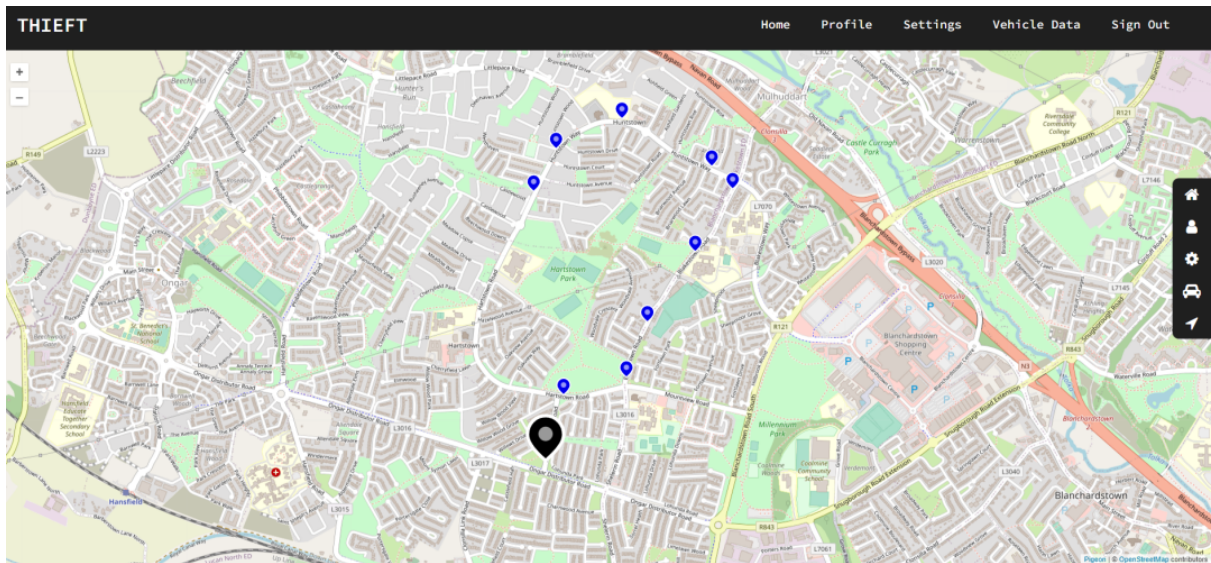
CHANGE PASSWORD



By heading to the vehicle data page in the navigation bar, or by clicking the vehicle icon in the sidebar, you will be able to view all of the data gathered from your vehicle. Every journey is cached and allows you to view where your vehicle has been to and from on each journey.

1	3	Collision	2022-04-24T14:51:06.656Z	60	53.3827649833333, -6.4052814	VIEW
1	3	Collision	2022-04-24T14:51:24.419Z	60	53.3829150333333, -6.4092738333333	VIEW
1	3	Collision	2022-04-24T14:52:03.803Z	60	53.3865000166667, -6.41022055	VIEW
1	3	Collision	2022-04-24T14:52:21.126Z	60	53.3867289166667, -6.4102202833333	VIEW
1	3	Collision	2022-04-24T14:52:34.606Z	60	53.3867253166667, -6.4102183166667	VIEW
1	3	Collision	2022-04-24T14:52:48.870Z	60	53.3877685, -6.4139346833333	VIEW
1	3	Collision	2022-04-24T14:53:04.890Z	60	53.3906031333333, -6.4133083	VIEW
1	3	Collision	2022-04-24T14:53:17.726Z	60	53.39113, -6.4156938333333	VIEW
1	3	Collision	2022-04-24T14:53:37.736Z	60	53.3936032666667, -6.4186276166667	VIEW
1	3	Collision	2022-04-24T14:54:52.039Z	60	53.3962913666667, -6.4170323166667	VIEW





You can see where you have travelled to and from on each journey by selecting the “view data” button for each journey in the table.