

USER MANUAL

iCrawler

Client: Emilio Mumba

Team: The 5 Concurrent Nodes

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1 Overview

*You have a 13 year old child whom in the past years excelled at school in academics and sports activities. Suddenly, out of the blue, you start noticing a change in his behavior; his/her grades are dropping, he/she spends more time alone and doesn't enjoy doing the things he/she use to do. This can be really stressful and saddening for any parent/guardian; even worse, when the child is not talking to you... he/she could be a victim of bullying, he/she could be associated with bad company, or it could be a temporal thing. **Where do you start?***

WHAT IS iCRAWLER?

iCrawler is a mobile monitoring app that monitors crucial activities on android mobile devices. The app uses the most efficient methods to collect and report the data to a dashboard. The user can then login, from anywhere in the world, and view the reported data.


WHY CHOOSE iCRAWLER?

The app is designed with the parent and child in mind. Unlike any other mobile monitoring app, the app is not designed for multi-purpose use, instead it is strictly focused on the parent and child. It makes use of highly efficient and reliable methods to collect the data without exhausting the devices limited resources. Extensive research was done in the technology used in the development. Through this the app and dashboard can be ranked with most, if not all, the current trending competitors.

iCRAWLER? FEATURES

- Call logging (incoming,outgoing, and missed)
- SMS logging (sent,received)
- Web monitoring (history)
- Wi-Fi connections (name, MAC)
- Installed apps (Facebook, Angry Birds, etc)
- User geolocation (last seen)
- Mobile device on/off

2 Configuration

 iCrawler	
Stable release	1.0
Development status	Active
Operating System	Android 4.2+
Platform	Android
Internet connection	Yes
Available in	English
Type	Monitoring Application
License	Free
Website	www.github.com/u11241617/COS301-Mobile-Monitoring-App

3 User Access Levels

Our Github repository is private, only invited users can download the application, additionally a user has to be registered on iCrawler to be able to have the app submit their user activities onto the dashboard, and to be able to log onto the dashboard.

4 Installation

The iCrawler APK (Android Application Kit) is currently only available for download on our GitHub repository. Follow this link in order to start the download...

<https://github.com/u11241617/COS301-Mobile-Monitoring-App/tree/master/Android%20Project/>

NB: Open the *app-release* folder to find the apk

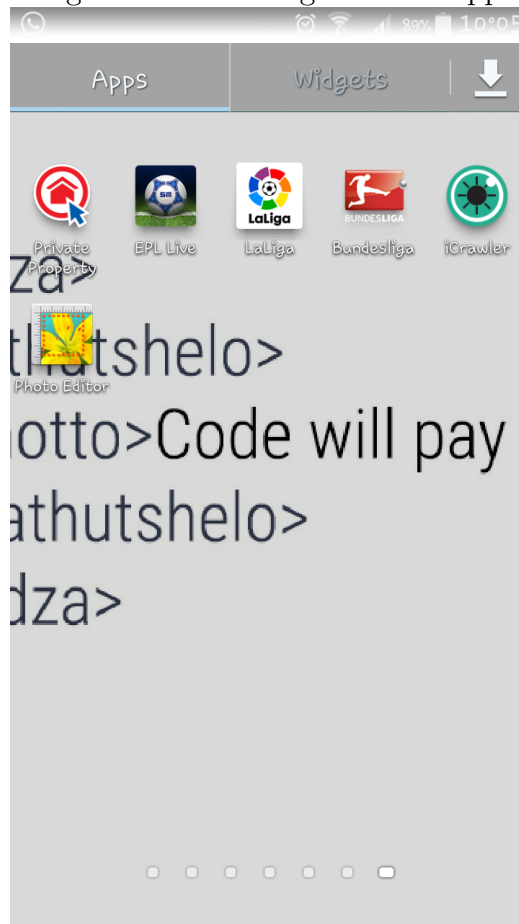
When the download has successfully completed the installation should automatically start, if not follow the following steps:

1. Navigate to 'File Management' from the options menu on your device
2. Under the 'Download' folder locate and launch a file named 'iCrawler.apk' within this folder
3. When a 'Install blocked' popup appears, select the 'Settings' option
4. Scroll down and check the option 'Unknown Sources'
5. Another popup will appear, simply click 'OK' then 'Next' followed by 'Install'
6. On completion you will see the options 'Done' and 'Open', click 'Open' to start the app ...

5 Getting Started

After successful installation, locate the iCrawler app icon and click on it to launch the app.

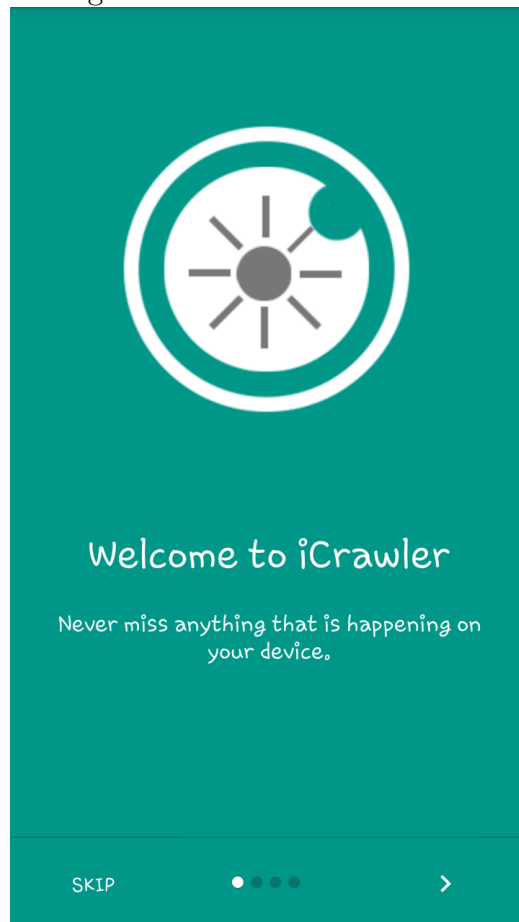
Figure 1: Launching iCrawler app



- **Welcome to iCrawler**

This is the landing page when you launch the app. This page introduces what the app is about and also provides you with the options to either proceed with the app tour or skip to sign up/sign in.

Figure 2: Welcome to iCrawler

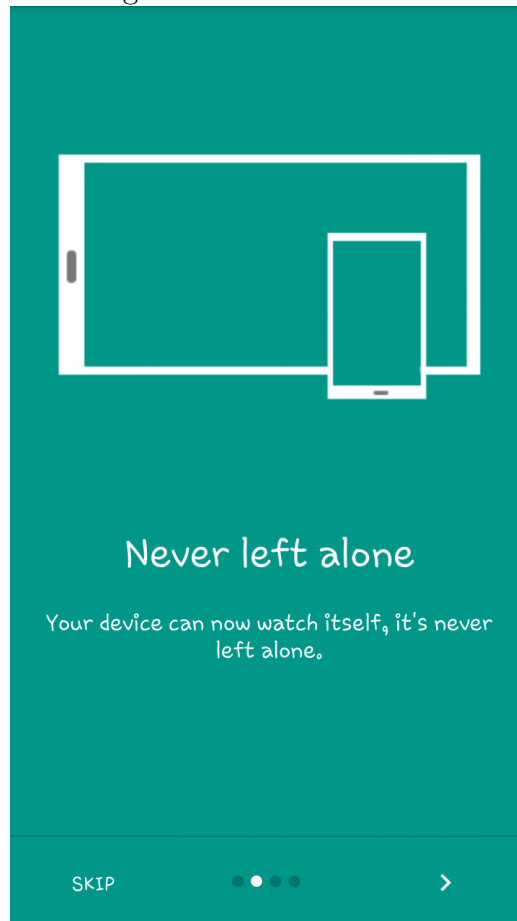


- **Take tour**

If you opt to take a tour, this tour will explain all the features that come with this app.

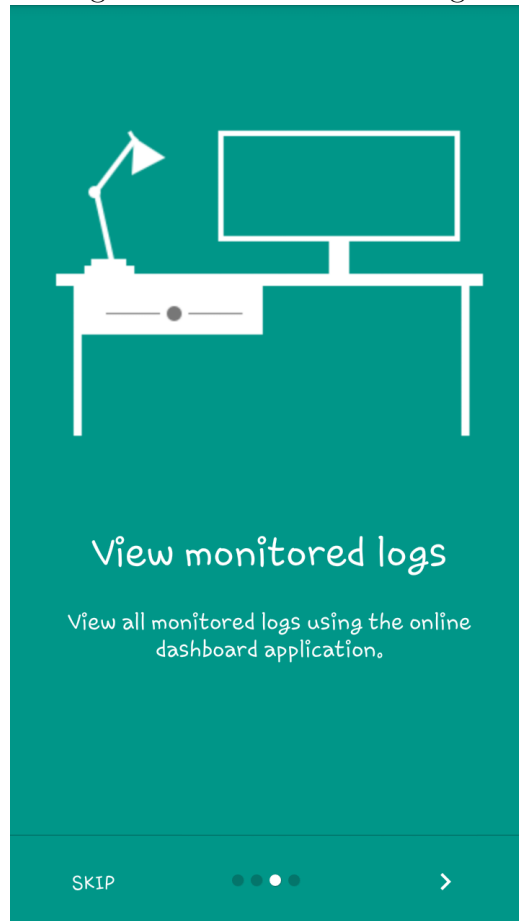
The app runs on the background collecting and compiling data logs of activities on your device.

Figure 3: Never left alone



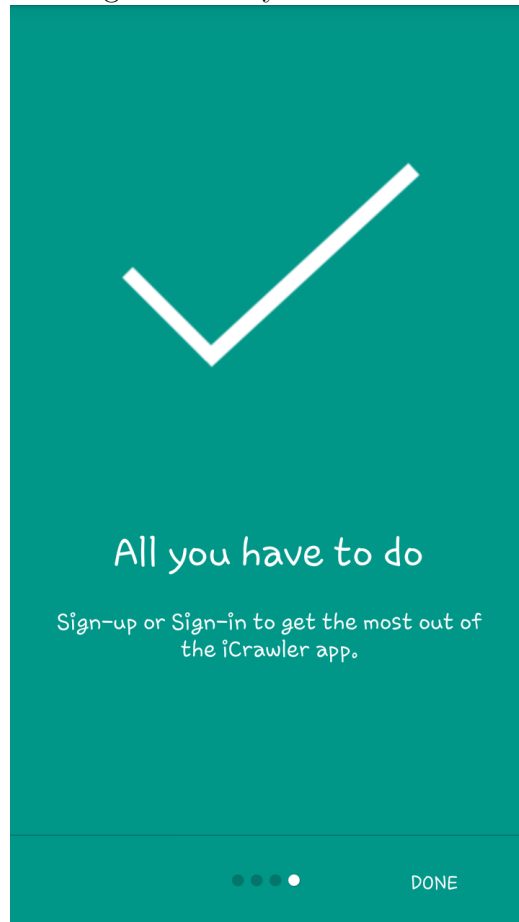
To view the compiled logs you simply log onto the web application, using either your laptop or desktop, with your credentials and view the collected data.

Figure 4: View monitored logs



To be able to use the awesome features that come with this app, all you have to do is sign up, if you are a new user, or simply just sign in and you are ready to go!

Figure 5: All you have to do

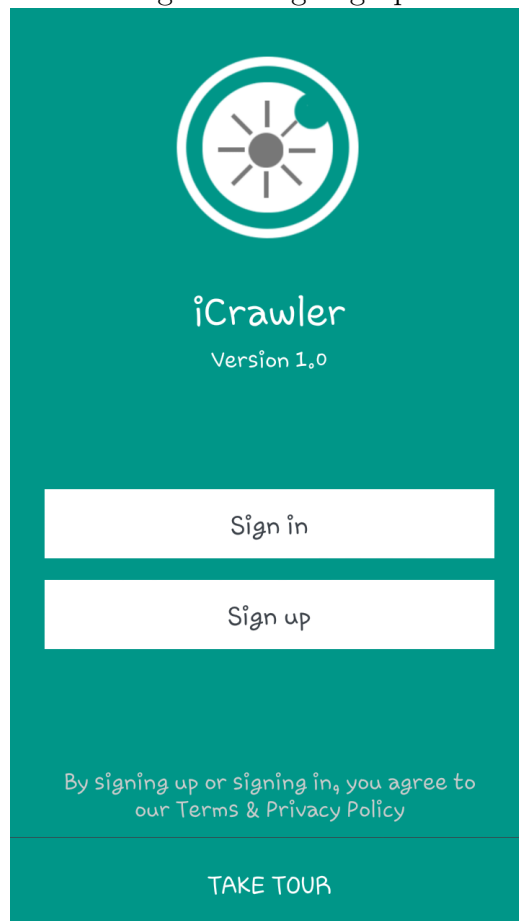


- **Skip tour**

If you decided to skip the app tour then you get the options to Sign up or Sign in; you can still take the tour by clicking the 'Take Tour' link at the bottom.

By signing up or signing in, you agree to our Terms and Privacy Policy.

Figure 6: Signing up



If you have never used the iCrawler app before, you need to sign up; simply enter your valid email address and password then click the 'orange arrow' pointing to the right in order to subscribe as a new user.

Figure 7: Signing up

Sign up

Email

Password

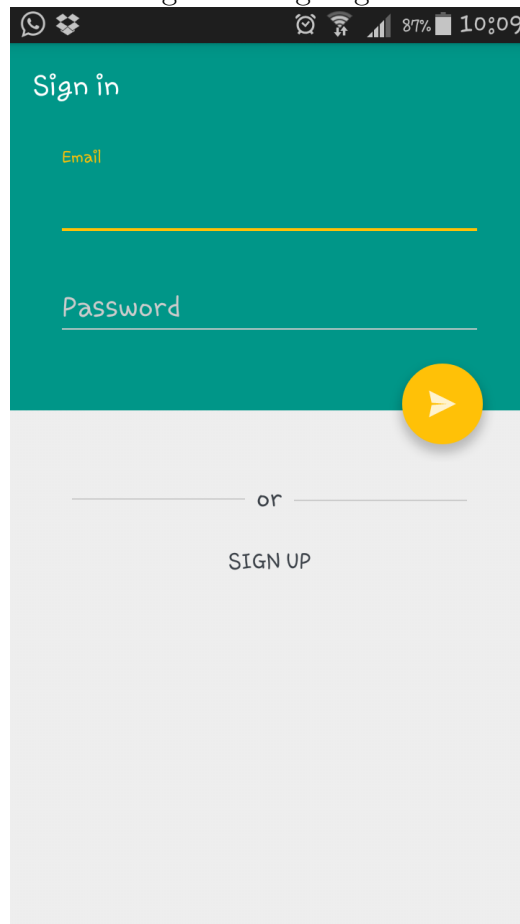
Confirm password

or

SIGN IN

If you have used the iCrawler app before, you need not to sign up again, simply enter your credentials and then click the 'orange arrow' pointing to the right in order to subscribe the new device. If not, click 'Sign up' to register as a new user.

Figure 8: Signing in

A screenshot of a mobile application's sign-in screen. The screen is divided into two main sections: a teal top half and a light gray bottom half. The teal section contains the text "Sign in" at the top left. Below it are two input fields: the first is labeled "Email" in yellow text and has a yellow underline; the second is labeled "Password" in white text and has a white underline. A large yellow circular button with a white right-pointing arrow is positioned on the right side of the teal section. The light gray section contains the word "or" centered between two horizontal lines, and below that, the text "SIGN UP" is centered.

6 Using the Mobile App

The app runs in the background after 'Signing up' or 'Signing in'; there is no other form of interaction with the app thereafter. You can access the log reports generated via the web application (dashboard).

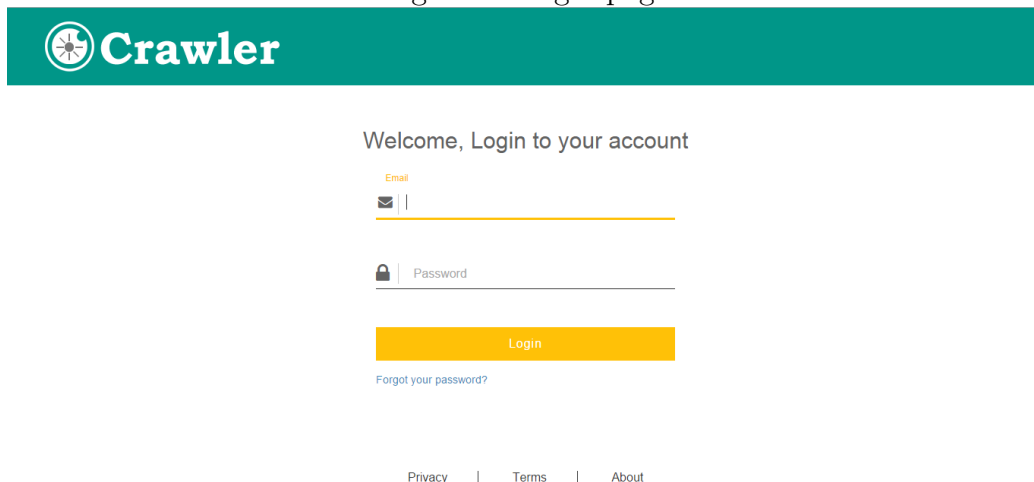
7 Using the Web App

The data collected from the mobile device can only be viewed using the web application (dashboard). The dashboard is highly responsive to different window dimensions but we recommend not going below 700x800.

- **Landing page**

This is the landing page that appears when using the desktop web browser. To login, the user must provide the requested credentials, which are the same as the ones he/she used when 'signing up' or 'signing in' using the mobile device app.

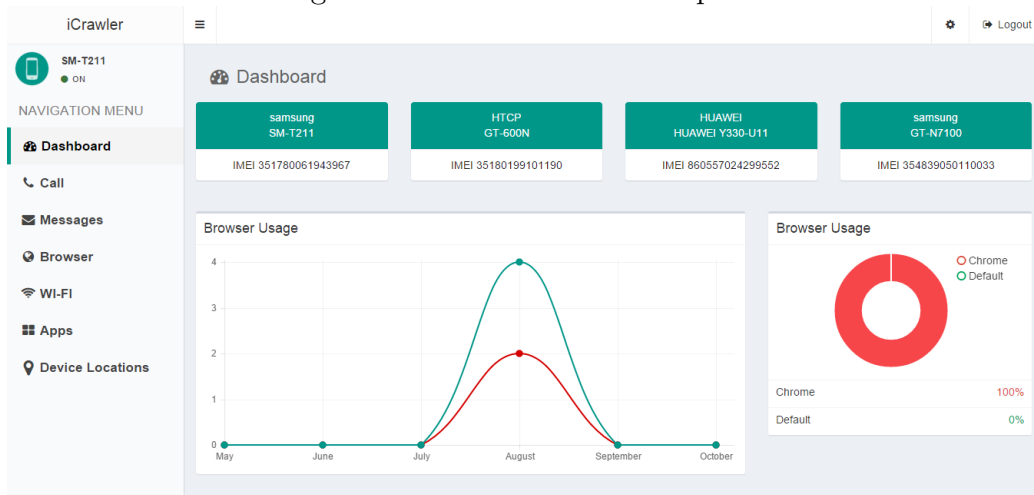
Figure 9: Login page

The image shows a web browser displaying the login page for 'Crawler'. At the top, there is a teal header bar with the 'Crawler' logo on the left, which consists of a white circle containing a stylized spider icon. Below the header, the text 'Welcome, Login to your account' is centered. Underneath, there are two input fields: the first is labeled 'Email' in orange text and contains an email icon; the second is labeled 'Password' in grey text and contains a lock icon. Both fields have orange horizontal lines below them. A solid orange button with the word 'Login' in white text is positioned below the password field. Below the button, there is a blue link that says 'Forgot your password?'. At the bottom of the page, there are three links: 'Privacy', 'Terms', and 'About', separated by vertical bars.

- **Home page**

On successful login, the user is welcomed by the dashboard home page. This page summarizes the data collected from the devices and all the devices linked with the current user account. On the top-left you find a notifier informing the user about the currently selected device and whether or not the device is on(green)/off(red).

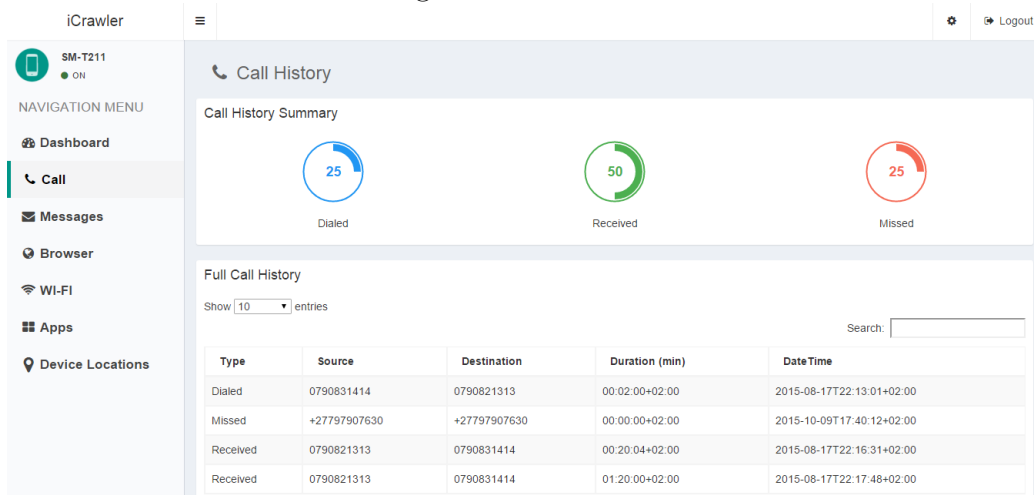
Figure 10: Dashboard control panel



- **Calls page**

This page consists of the reports collected from the call activities on the mobile device. A summary of the total dialed, received, and missed calls is provided to aid the user.

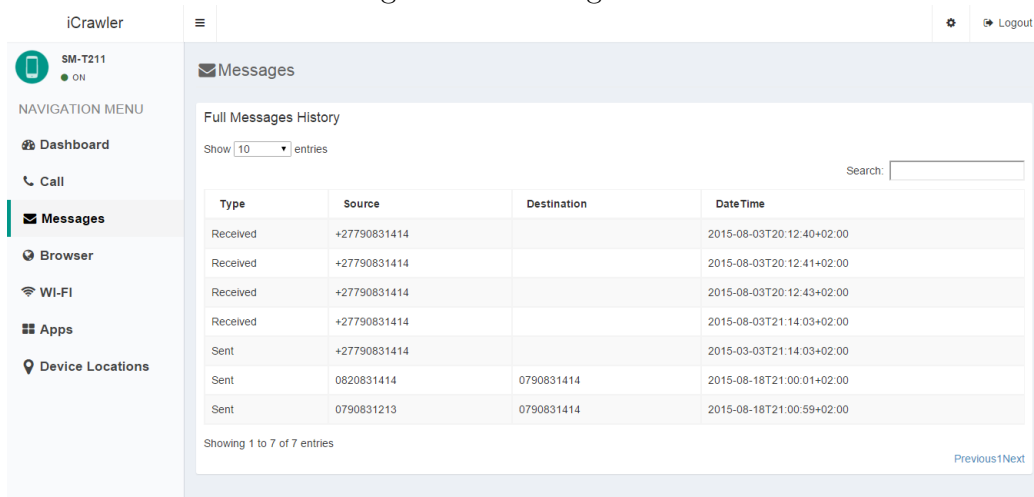
Figure 11: Call data



- **Messages page**

This page consists of the reports collected from the messaging activities on the mobile device. Due to the Privacy Act in our country we can not retrieve the communicated content.

Figure 12: Messages data



The screenshot shows the 'Messages' page in the iCrawler interface. On the left is a navigation menu with options: Dashboard, Call, Messages (selected), Browser, WI-FI, Apps, and Device Locations. The main content area is titled 'Messages' and 'Full Messages History'. It includes a 'Show 10 entries' dropdown and a search bar. Below is a table with 4 columns: Type, Source, Destination, and Date Time. The table contains 7 entries. At the bottom, it says 'Showing 1 to 7 of 7 entries' and has 'Previous' and 'Next' links.

Type	Source	Destination	Date Time
Received	+27790831414		2015-08-03T20:12:40+02:00
Received	+27790831414		2015-08-03T20:12:41+02:00
Received	+27790831414		2015-08-03T20:12:43+02:00
Received	+27790831414		2015-08-03T21:14:03+02:00
Sent	+27790831414		2015-03-03T21:14:03+02:00
Sent	0820831414	0790831414	2015-08-18T21:00:01+02:00
Sent	0790831213	0790831414	2015-08-18T21:00:59+02:00

- **Browser page**

This page consists of the reports collected from the internet browsing activities on the mobile device. The browser used, URL visited, including the frequency are included in the report.

Figure 13: Internet browsing data

iCrawler

SM-T211
ON

NAVIGATION MENU

- Dashboard
- Call
- Messages
- Browser**
- Wi-Fi
- Apps
- Device Locations

Browser

Full Call History

Show 10 entries

Search:

Browser	Visited url	Frequency
Chrome	www.up.ac.za	10
Chrome	www.facebook.com	3

Showing 1 to 2 of 2 entries

PreviousNext

- **Wifi page**

This page consists of the reports collected from the wifi connection activities on the mobile device.

Figure 14: Wifi connection data

WIFI Logs

Show 10 entries

Search:

SSID	BSSID	IP	MAC Address	Connection Date and Time
TUKS	6c:f3:7f:4b:86:b0	196.248.104.91	4C:3C:16:E8:D7:DC	2015-10-08 17:39:45
TUKS	6c:f3:7f:4b:86:b0	196.248.104.91	4C:3C:16:E8:D7:DC	2015-10-08 17:39:45
TUKS	6c:f3:7f:4b:86:a0	196.248.104.91	4C:3C:16:E8:D7:DC	2015-10-08 17:46:29
TUKS	6c:f3:7f:4b:86:a0	196.248.104.91	4C:3C:16:E8:D7:DC	2015-10-08 17:46:29
TUKS	6c:f3:7f:4b:86:a0	196.248.104.91	4C:3C:16:E8:D7:DC	2015-10-08 17:46:31
TUKS	6c:f3:7f:4b:86:b0	196.248.104.91	4C:3C:16:E8:D7:DC	2015-10-08 18:54:12
TUKS	6c:f3:7f:4b:86:b0	196.248.104.91	4C:3C:16:E8:D7:DC	2015-10-08 20:02:49
TUKS	6c:f3:7f:4b:86:b0	196.248.104.91	4C:3C:16:E8:D7:DC	2015-10-08 20:06:07
TUKS	6c:f3:7f:4b:86:b0	196.248.104.91	4C:3C:16:E8:D7:DC	2015-10-08 20:08:42
TUKS	6c:f3:7f:4b:86:b0	196.248.104.91	4C:3C:16:E8:D7:DC	2015-10-08 20:10:53

- **Apps page**

This page consists of the reports collected from the installed apps on the mobile device. The 'running status' column assists in determining whether the app runs on the foreground, running or stopped/closed.

Figure 15: Installed apps data

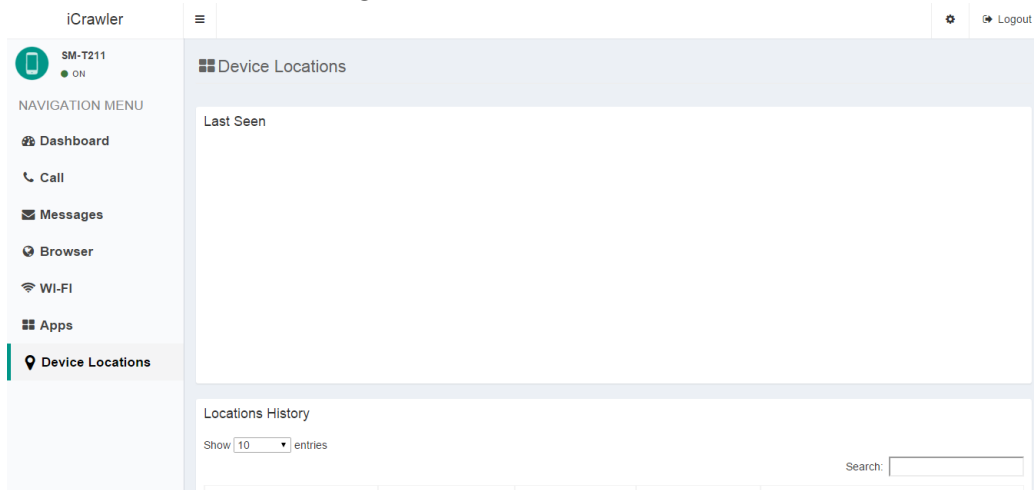
The screenshot shows the iCrawler web interface. On the left is a navigation menu with options: Dashboard, Call, Messages, Browser, Wi-Fi, **Apps** (highlighted), and Device Locations. The main content area is titled 'Applications' and shows 'Device Applications'. It includes a 'Show 10 entries' dropdown and a search bar. Below is a table of installed apps.

Name	Version	App Package	Running Status
Alarm	1.0	com.sec.android.app.clockpackage	Stopped/Closed
BasicSyncAdapter	1.0	com.example.android.basicsyncadapter	Foreground
Bubble Witch Saga 2	1.13.4	com.midasplayer.apps.bubblewitchsaga2	Stopped/Closed
Calculator	1.0	com.sec.android.app.popupcalculator	Stopped/Closed
Camera	1.5	com.sec.android.app.camera	Stopped/Closed
Candy Crush Saga	1.34.1	com.king.candycrushsaga	Stopped/Closed
Careers24	1.3	com.careers24.core	Stopped/Closed
Caynax A6W	8.4.6	com.caynax.a6w	Stopped/Closed
Cell C	4.1.2-T211XXAMK7	com.android.phone	Foreground
ChatON	2.3.22	com.sec.chaton	Background / Closed

- **Device location page**

This page consists of a summary of the last know locations of the user's mobile device. This data is reported every 30min.

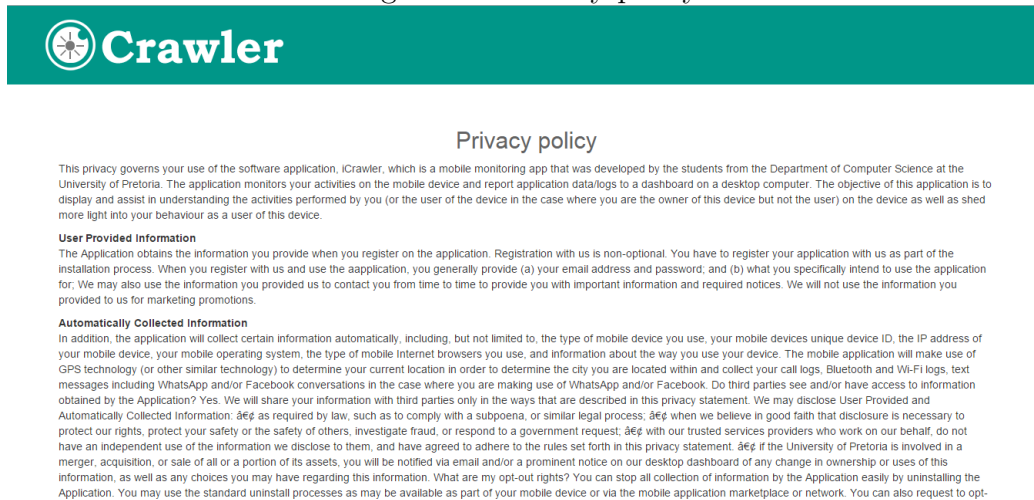
Figure 16: Geo location data



- **Privacy page**

The privacy policy of the iCrawler services are all stated here.

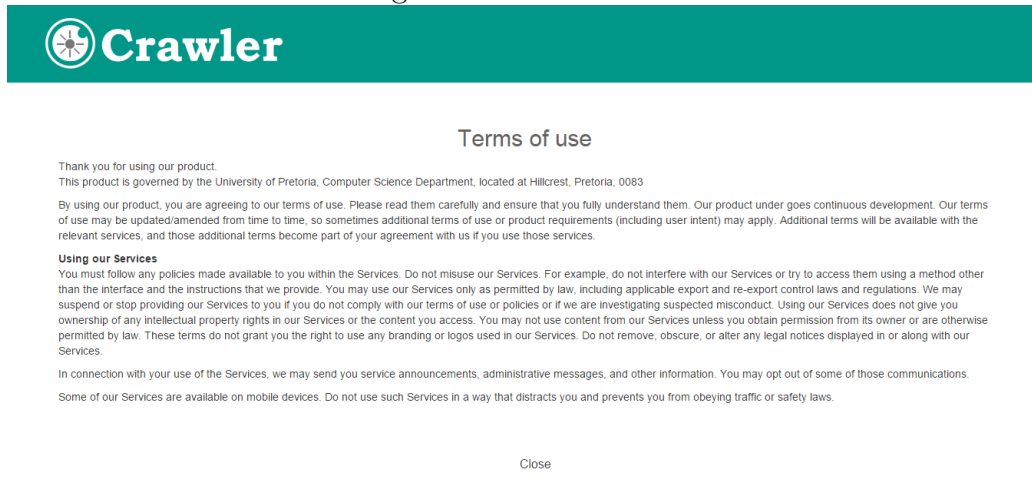
Figure 17: Privacy policy



- **Terms page**

The Terms of use of the iCrawler services are all stated here.

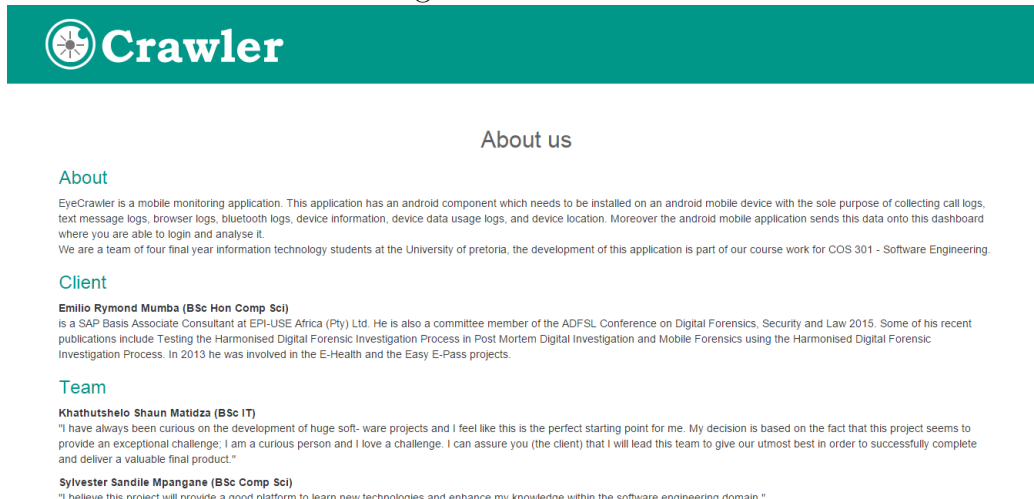
Figure 18: Terms of use



- **About page**

This About page consists of all the relevant information regarding all the involved parties in this project.

Figure 19: About us



8 Troubleshooting

The following section lists some of the iCrawler app's possible issues and resolutions:

- **Does not launch.** Restart your phone and try to launch the application again.
- **Crashes immediately after launch.** Ensure that your device meets the minimum specifications to run iCrawler (See configurations). Go to Settings → Apps → Manage Apps → Running, to check if your apps are not using up all your memory. Try to end all processes you do not need and re-start your phone.
- **Other unknown causes.** If problems continue, delete the app completely and then reinstall it.