



# GeoBus

## User Documentation

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This document is a guide to new GeoBus users. Its aim is to be a guide of how to install the application, and to be an example of how to use it.

As part of this document a user story will be followed step by step: “I, as a user, want to be able to see the UCSC loop buses on a map.” Sections 1 (Installation Manual) and 2 (Use of the App) covers this user story.

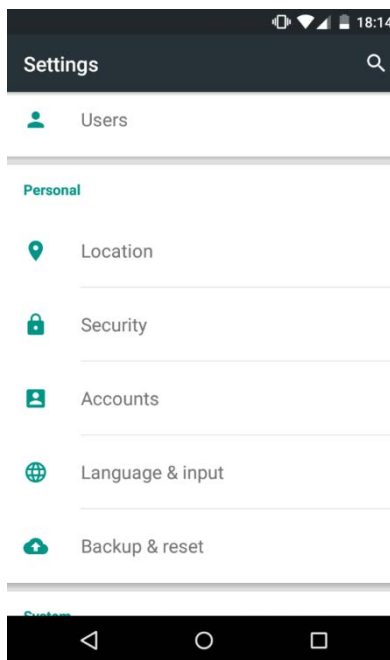
In order to use the app, first we need to install it.

Although the app is supported in devices running android versions higher that 4.4, this guide is meant for devices running android 5.x. For other android versions, check the “Android Versions” section of this document.

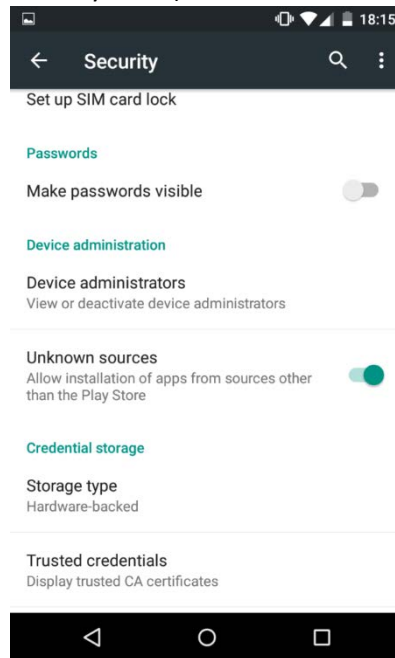
## 1. Installation Manual

Anyone who wants to install the app, needs to follow this steps:

- Step 1: Access the phone’s settings, and open the “Security” menu.

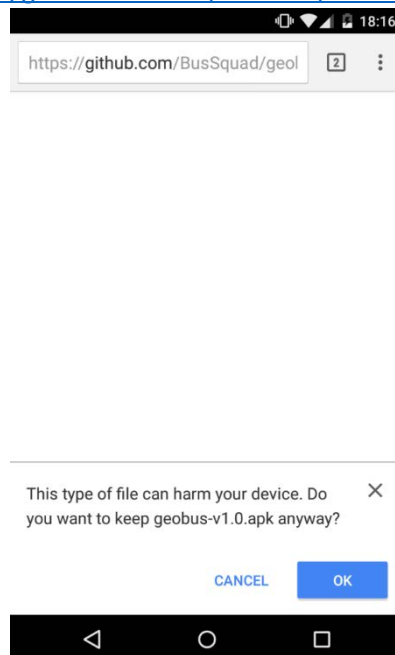


- Step 2: Scroll down to the option “Unknown sources”, and activate it (Allow installation of apps from sources other than the Play Store).



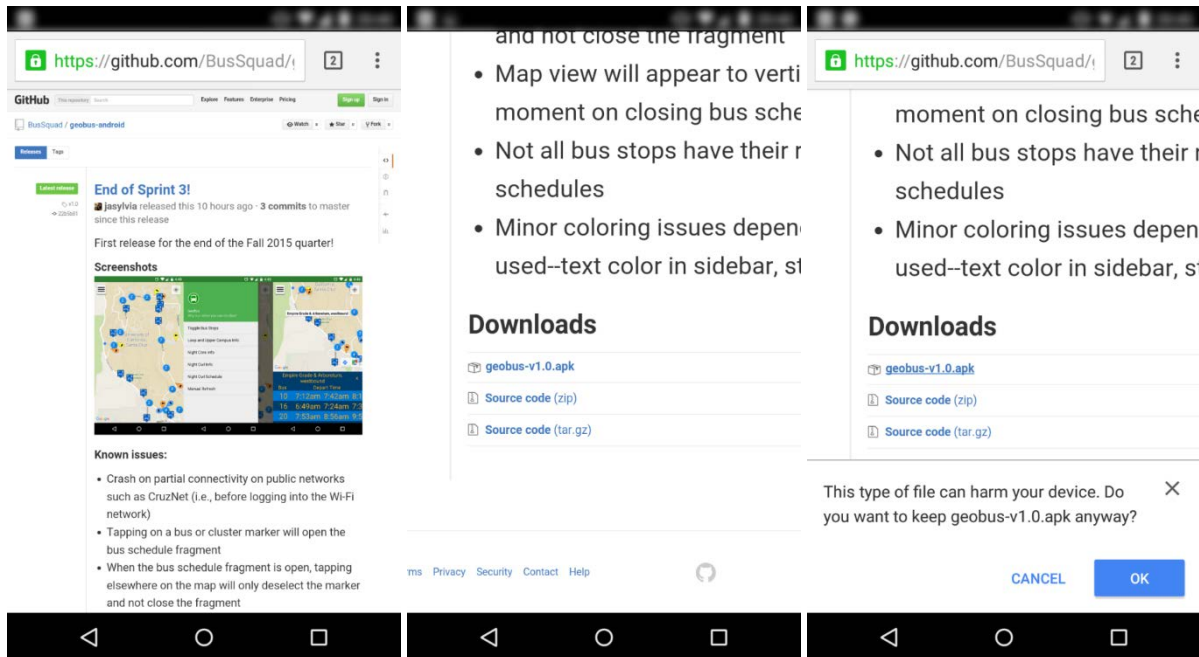
- Step 3 (a): Access the download link on the phone (type it in your web browser), and accept the download:

<https://github.com/BusSquad/geobus-android/releases/download/v1.0/geobus-v1.0.apk>

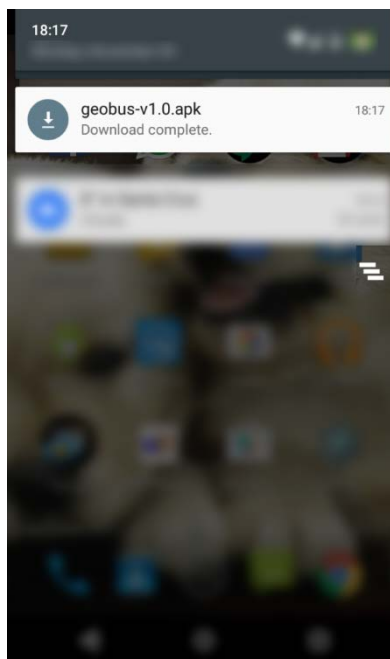


- Step 3 (b): Instead of using the direct link, you can access the github repository and download the latest version from there. Just follow the link and click on the latest version. Accept the download.

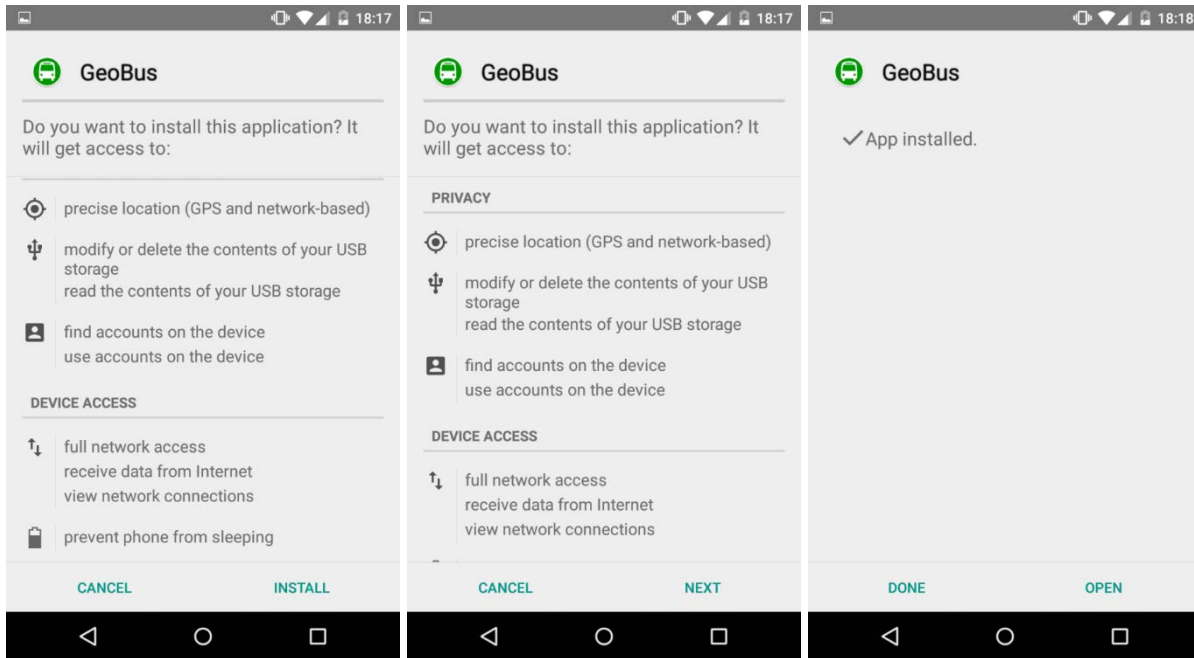
<https://github.com/BusSquad/geobus-android/releases/>



- Step 4: Open the notifications bar, and click on the .apk download when it has finished;



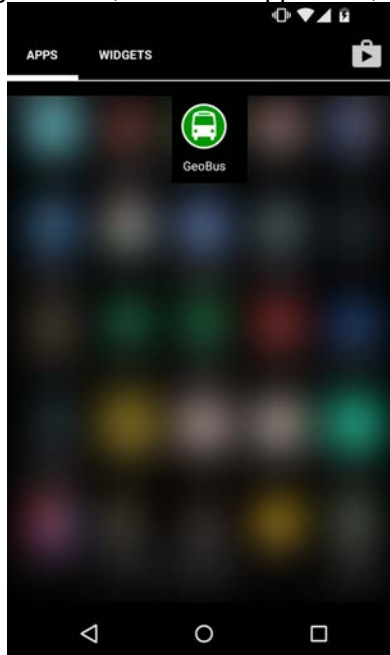
- Step 5: Accept the installation of the app, and install it.



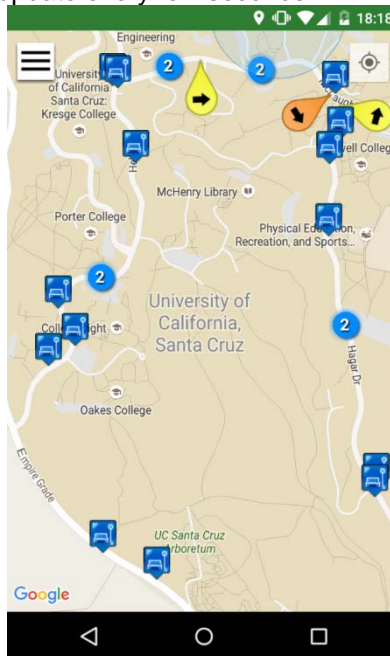
## 2. Use of the App


The main functionality of the app is to show where the loop buses are on campus, as well as the bus stops. Let's explore how we can use this functionality.

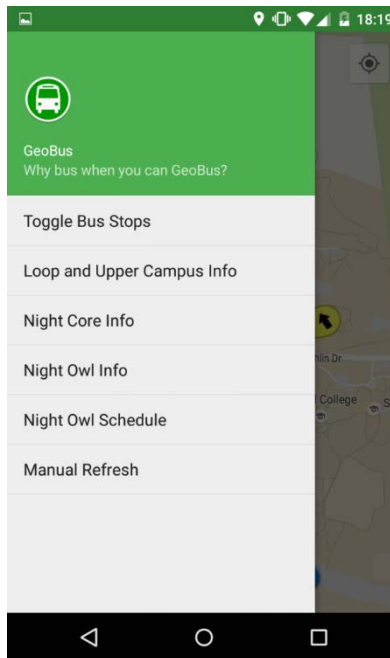
- Once the app has been installed, locate the app's icon, and open it.



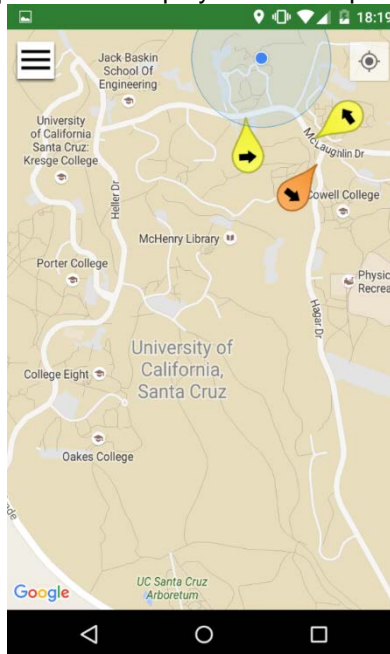
- When the app opens, it displays the current loop busses on the UCSC campus, and the bus stops. Buses positions update every few seconds.



- To hide/show the bus stops, click on the icon on the top left corner (  ) to display the hamburger menu (you can also slide your finger from the left edge of the screen, towards the center of the screen).

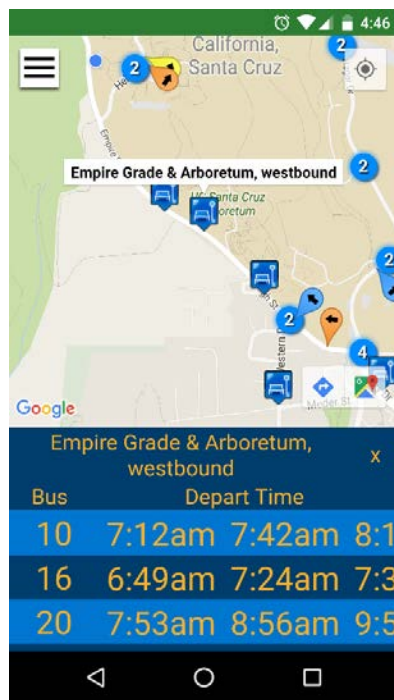


- Select "Toggle Bus Stops" to hide/display the bus stops.






- Tapping on a bus stop will show the buses that make that particular stop and the times in which they do so. Note that this feature is incomplete, as not all bus stops' times have been implemented.




### 3. Other Uses

GeoBus has more functionalities than the ones already described. All this functions (except the “Locate User” function) can be accessed from the hamburger menu.

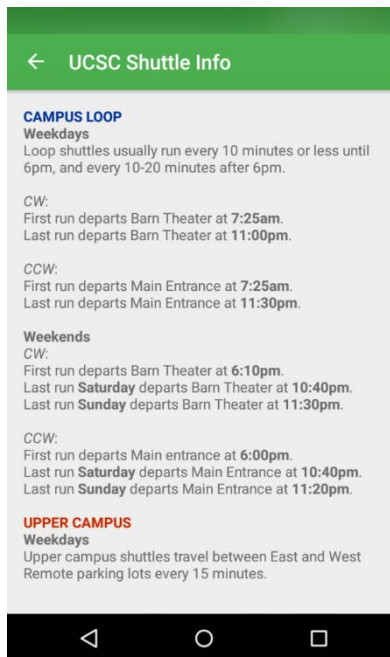
To go back to the map or exit any of this functionalities, click the back button (  ).

#### *a. Locate User*

When clicking the top right icon (  ) the map will be centered in the current user’s position, to have a better idea of what bus stop/ bus is closer to the user.

#### *b. Loop and Upper Campus Info*

Shows information and schedules for loop and upper campus buses.



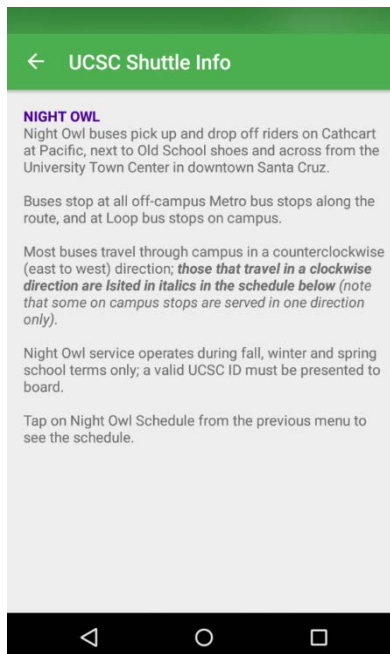
c. *Night Core Info*

Shows information and schedules for night core buses.



d. *Night Owl Info*

Shows information for the night owl buses.



e. *Night Owl Schedule*

Shows the night owl's schedule.



The screenshot displays the 'Night Owl Schedule' app interface. At the top, there is a green header with a back arrow and the title 'Night Owl Schedule'. Below the header is a table with columns for different bus routes: Colliart & Pacific, Mission & Bay, Bay & High, Science Hill, Bay & High, Mission & Bay, and Colliart & Pacific. The table is organized by day of the week: Sundays - Thursdays, Fridays, and Saturdays. Each day section contains a list of bus departure times in a grid format. The times are listed in 15-minute intervals, starting from 11:45pm and ending at 2:50am. The interface is designed to be user-friendly, with clear headings and a structured layout for the schedule data.

Colliart & Pacific	Mission & Bay	Bay & High	Science Hill	Bay & High	Mission & Bay	Colliart & Pacific
<b>Sundays - Thursdays</b>						
11:45pm	11:52pm	12:00am	12:05am	12:13am	12:16am	12:26am
12:30am	12:37am	12:40am	12:50am	12:56am	1:01am	1:11am
1:15am	1:22am	1:25am	1:35am	1:43am	-----	-----
<b>Fridays</b>						
11:45pm	11:52pm	11:55pm	12:05am	12:13am	12:16am	12:26am
12:10am	12:17am	12:20am	12:30am	12:38am	12:41am	12:50am
12:50am	12:57am	1:00am	1:10am	1:18am	1:21am	1:30am
1:10am	1:17am	1:20am	1:30am	1:38am	1:41am	1:50am
1:30am	1:37am	1:40am	1:50am	1:58am	2:01am	2:10am
1:50am	1:57am	2:00am	2:10am	2:18am	2:21am	2:30am
2:10am	2:17am	2:20am	2:30am	2:38am	2:41am	2:50am
2:30am	2:37am	2:40am	2:50am	2:58am	-----	-----
2:50am	2:57am	3:00am	3:10am	3:18am	-----	-----
<b>Saturdays</b>						
11:30pm	11:37pm	11:40pm	11:50pm	11:58pm	12:01am	12:11am
11:50pm	11:57pm	12:00am	12:10am	12:18am	12:21am	12:30am
12:10am	12:17am	12:20am	12:30am	12:38am	12:41am	12:50am
12:50am	12:57am	1:00am	1:10am	1:18am	1:21am	1:30am
1:10am	1:17am	1:20am	1:30am	1:38am	1:41am	1:50am
1:30am	1:37am	1:40am	1:50am	1:58am	2:01am	2:10am
1:50am	1:57am	2:00am	2:10am	2:18am	2:21am	2:30am
2:10am	2:17am	2:20am	2:30am	2:38am	2:41am	2:50am
2:30am	2:37am	2:40am	2:50am	2:58am	-----	-----
2:50am	2:57am	3:00am	3:10am	3:18am	-----	-----

f. *Manual Refresh*

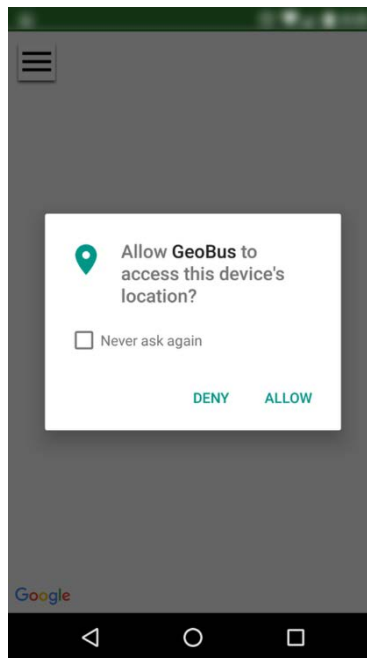
Refreshes the buses positions manually.

## 4. Android Versions

The app is officially supported in all android versions above 4.4.

### *a. Android Marshmallow (6.0 and above).*

When first opening the app, the app will request access to the device's location. If it is not granted, some functionalities may not be available (such as "Locate User").



### *b. Other Android versions (lower than 4.4)*

Not officially supported.

## 5. Further Development

This section is aimed to anyone wishing to continue developing this project.

### *a. What to do next*

Some things that this app would benefit from having are:

- Fill all the incomplete data.
- Drawing the bus routes when clicked on a bus marker.
- Estimated time of arrival for buses when a bus stop is selected.
- Expand functionality for metro buses (first with estimated schedules, and the with real data)

### *b. What you need to know*

Read carefully the description in the .java classes, and the comments in the code, to be able to understand it.

Reading the SQLite Database Documentation PDF document is a must, in order to understand how the data is stored and retrieved.