



GeoBus

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Bus Squad



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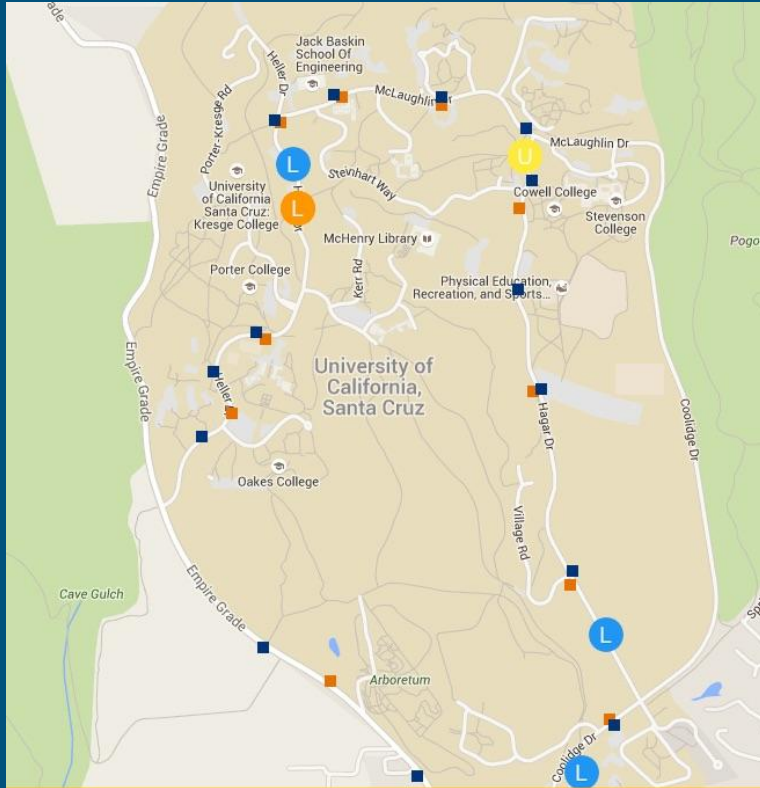


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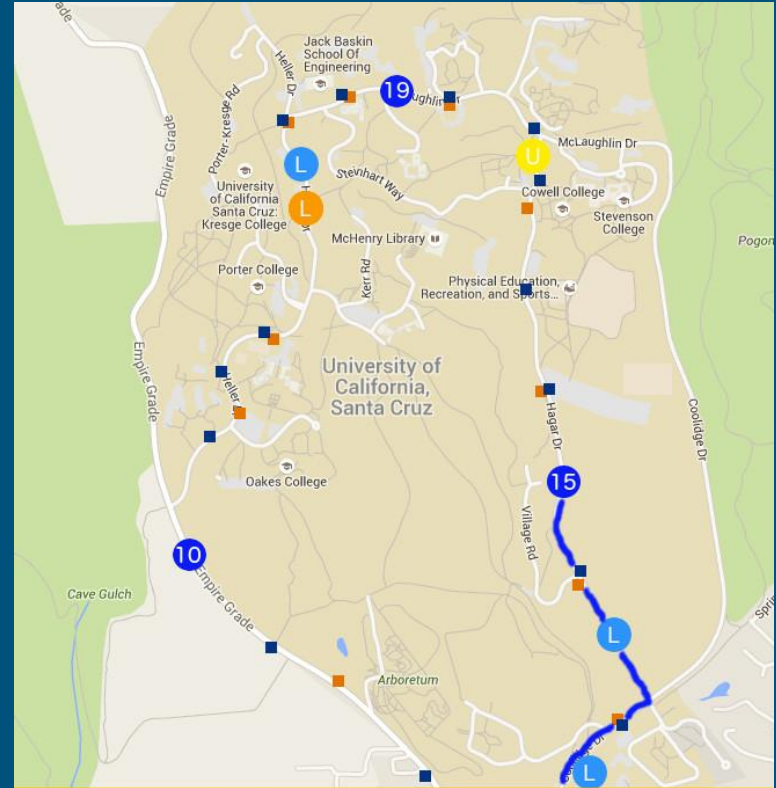
about our app and our goals

We're creating a mobile application that allows UCSC students to have easy accessibility to real-time locations of both Santa Cruz Metro and campus shuttle buses relative to the user's current location.

slugroute.com



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sprints and user stories

Sprint 1

- As a user, I want to be able to open the app and immediately see a Google Map of UCSC showing a bus on it so that I know how close it is to my current location.
- As developers, we'll need to set up a git repository so that we can easily collaborate on the same source code.

Overall Goal: A working, basic UI that displays the position of one campus bus in realtime (or close to it, refresh rate ~5 seconds)

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sprints and user stories

Sprint 2

- As a user, I want to be able to see all active shuttles updating in real time in order to determine which bus best suits my destination on campus.
- As developers, we want to have started writing documentation in order for this project to carry on after this course ends.

Overall Goal: Improved UI with **ALL active campus buses** displaying and half baked documentation.

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sprints and user stories

Sprint 3

- As a user, I would like to know the current locations of any Metro buses just in case I live off-campus so that I can plan my ride home accordingly.
- As a user, I would also like to know the route each bus is going to take just in case I don't know which bus goes where.

Overall Goal: Expand functionality to include Metro lines and finalize documentation.

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overall structure

Each shuttle transmits its GPS data and the string displayed on its sign (Upper Campus, Loop, etc.) to their base stations. When the base stations receive this data, they store it on a server.

A lab database in Baskin Engineering grabs this information, and stores it in an XML file. Our app will query this XML file for this information and display it in a user-friendly environment on both Android and iOS.

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challenges and risks

Challenge/Risk 1: Interfacing with existing servers and understanding how they perform predictions for adapting to SC Metro.

Challenge/Risk 2: Learning how to develop a mobile application, especially in iOS.

Challenge/Risk 3: Uncertainty of collaborating with SC Metro and the potential lack of hardware-based bus locations.

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sprints and user stories

Technology 1: For Android, Java and XML. For iOS, Swift.

Technology 2: Interfacing with Slugroute's server/GPS data (MySQL).

Technology 3: Android Studio/Eclipse, and Xcode.

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Questions

Thank you.