



Marta sense

Team: "IS Homework Due
TONIGHT?"

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The Problem

Riders are not
evenly
distributed
between cars or
buses

Train cars and
buses can be
loud and busy

There is no way to
know before
getting on your
ride what your
experience will be
like





Our goals

- Allow riders to customize their riding experience
 - Choose a quiet or empty car
 - Wait for the next bus or train
- Create a better riding experience on MARTA
 - Distribute passengers based on environment preference
 - Evenly distribute riders during rush hour to avoid overcrowding





Our Solution

marta sense

A mobile application that tells riders how crowded or noisy each car is





What is this magic?

How does the app know how crowded each car is?

- A **Raspberry Pi** on each car uses an ultrasound sensor to count the number of passengers and dynamically update the information on a remote server



What sorcery is this???

How does the app know how loud each car is?

- Every phone running the application is guaranteed to have a **microphone**
- Users already in the car can choose to allow the app to collect noise level data, and tell it which car they are in





How would you incentivize passengers to provide data?

- The app keeps track of how long the microphone has been running
- This information could be used to provide proportional **discounts** or other **promotions** to participating passengers via the new MARTA app

