

# CTA Project Plan

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## 1 Research Questions

### 1.1 Bunching

- How much deviation from the standard route highly predicts for bunching?
- How does this change when different parameters are marginally changed?

## 2 Data

### 2.1 From CTA

Route	StopID	TimeStamp	Prediction	BusID	Arrival	Boarding Passengers
171	1659	20150228 07:07	20150228 07:10	4189	20150228 07:11	4
171	4872	20150228 07:06	20150228 07:10	4310	20150228 07:10	1
171	14483	20150228 07:06	20150228 07:12	4317	20150228 07:11	2
172	...	...	...	...	...	...
...	...	...	...	...	...	...

### 2.2 From API

Exact locations of the stops to make scaled representations of the routes

### 2.3 Descriptives

- Number of observations by bus, stop, day, etc.
- Codebook for data
- Scaled map of actual routes
- Heat map of where the most number of riders board
- Distribution of time when the busses are used

- Deviation from planned schedule
- Arrival time using the prediction

### **3 Timeline**

**August 7:** Get data, with luck. Coordinate with Lenny

**August 8/August 9:** Clean data, start descriptives

**August 11:** Have most of descriptives done. Send Lenny report

**After August 12:** Skype with Lenny and re-assess

**September 25:** Full draft