

USC Viterbi

School of Engineering

CitiBike Data Analytics

- <https://phumphri.github.io/CitiBike/>
- <https://humphries-citibike.herokuapp.com/>

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Project Description

CitiBike provides five years of ride history in raw, csv format.

This data is analyzed and presented to the end user in the following steps:

- Data Acquisition
- Data Modeling
- Data Access
- Data Visualization.

Timeframe

The project was completed in two weeks. An existing project was used as a framework, allowing the inclusion of additional features.

Tech Used

- Database Server: Postgres hosted by Amazon Web Services (AWS).
- Application Server: Heroku server hosting a python/flask application.
- Visualization Server: Tableau Public
- Performance: Materialized views used to perform selection, projection, and aggregation.
- Decompose: `statsmodels.tsa.seasonal`
- Regression: `sklearn.linear_model`

Challenges

- The 60 files did not have a consistent naming scheme.
- The 60 files had different structures.
- The 60 files resulted in a database with 60 million rows.