# **Moving Truck Rentals**



Web Scraping Project Aug 09, 2018 Xu Huang

## **MOVING 101**

The guide to everything you need to know before you go get moving company quotes



Overview

Moving Cost Calculator

Options Comparison

Company Guides

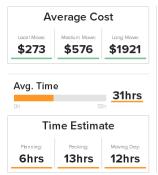
Reviews

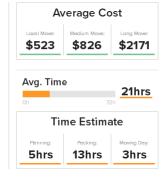
#### **MOVING OPTIONS COMPARISON**













#### HYBRID™ & DIY MOVING COMPANY GUIDES











### **MOVING OPTIONS COMPARISON**









## **MOVING OPTIONS COMPARISON**



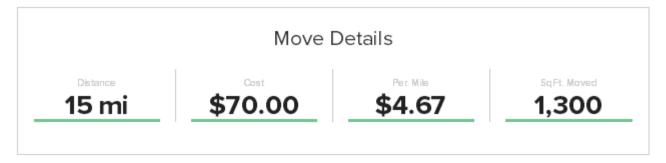






#### **U-Haul Truck Customer Reviews**





- Scraping method: Slow process...
- Analyzing methods: R & Python



 U-Haul, Penske and Budget are the main focus

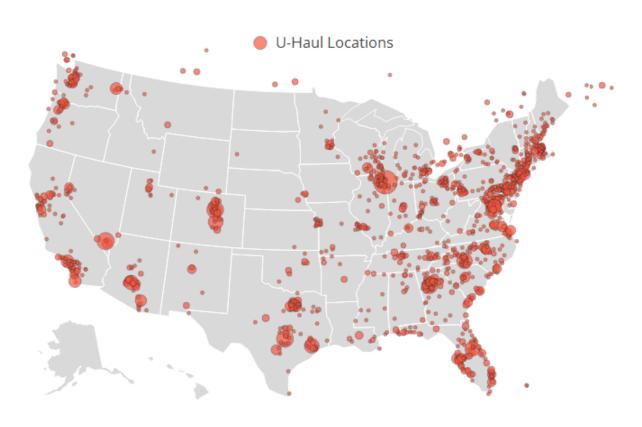


Enterprise and Ryder are mainly for testing purpose



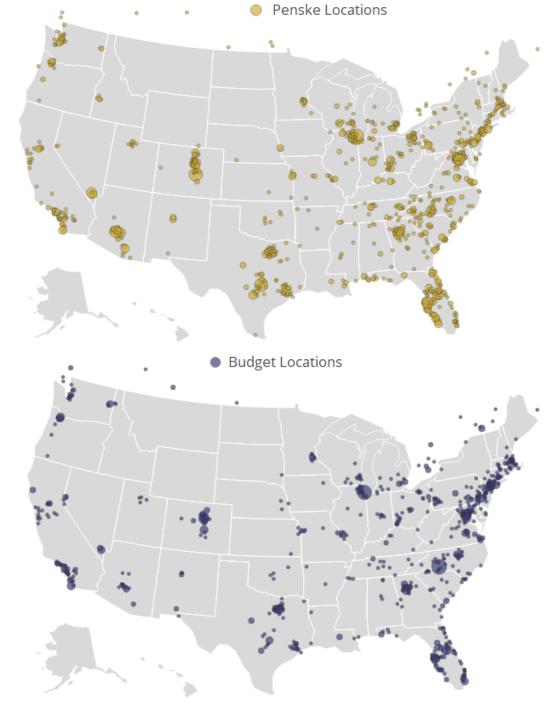




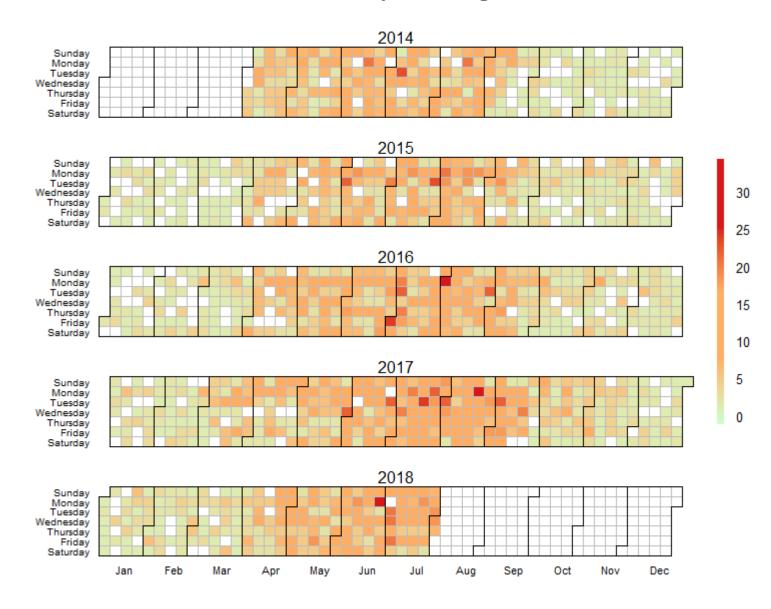


## Geopy bubble map requires geocoders

**GeocoderQuotaExceeded**: ('HTTP Error 429: Too Many Requests', 'occurred at index 2348')



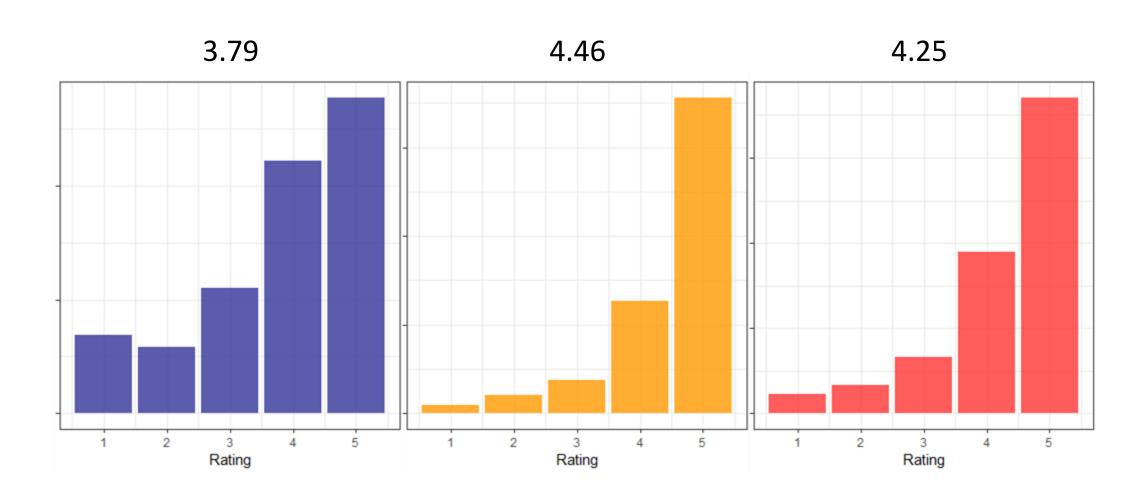
#### **Calendar Heat Map of Moving Count**

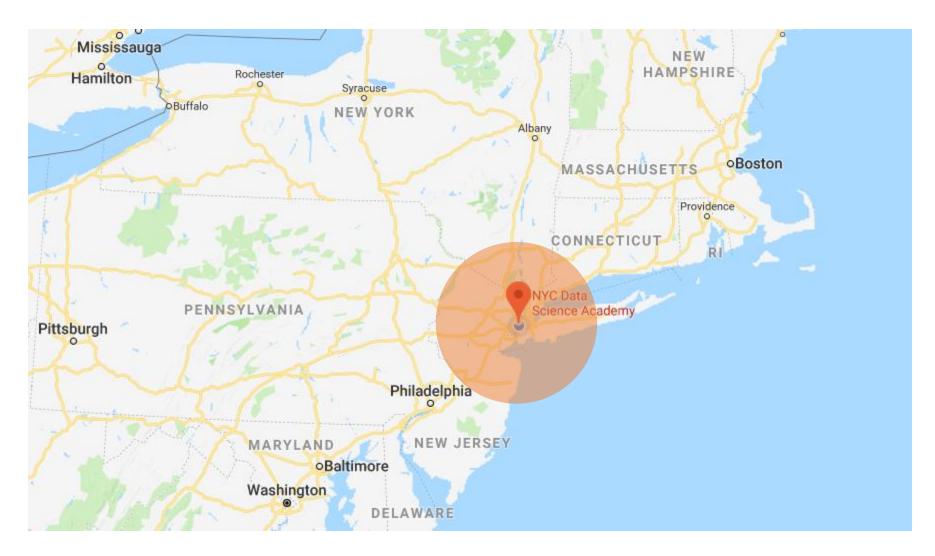


- Moving business reaches peak in high summer
- Weekly pattern is not very clear



## Average Rating:

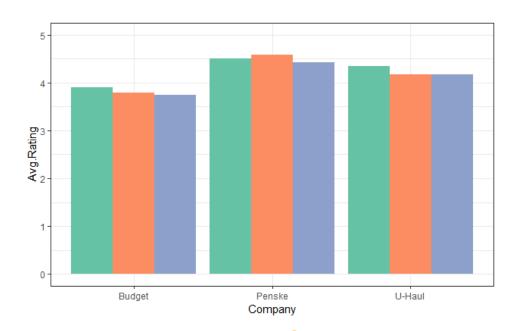


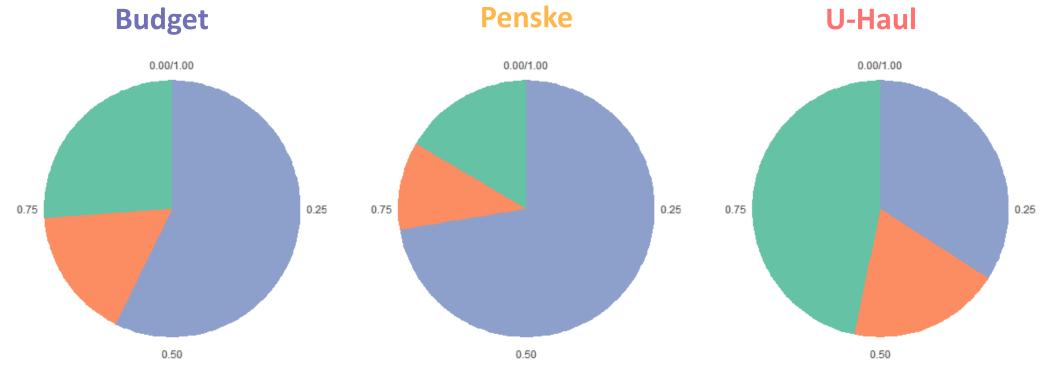


Distance: Local (< 50 miles), Medium (50 ~ 250 miles), Long (> 250 miles)

## Rating by Distance:







## Local 0.0020 -Medium Long 0.0015 density 0.0010 0.0005 -0.0000 2000 4000 6000 Sqft.Moved

### **MOVING LABOR GUIDE**





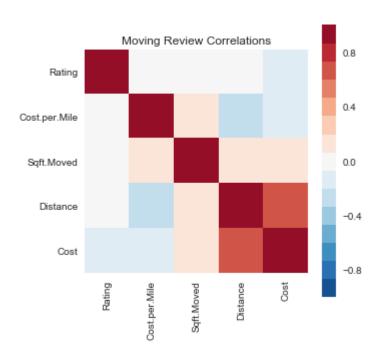




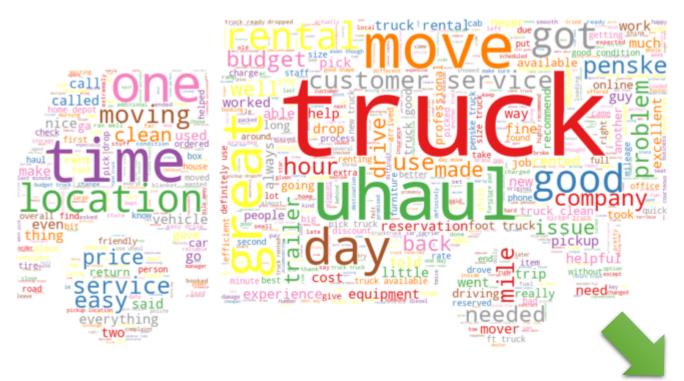


2-3 Bedroom Apt/House are the peak choices for truck rental

# Only Distance & Cost show strong positive correlation



	Budget	Penske	U-Haul
Local	21.1	19.4	16.6
Medium	1.98	2.78	2.18
Long	1.13	1.30	1.39

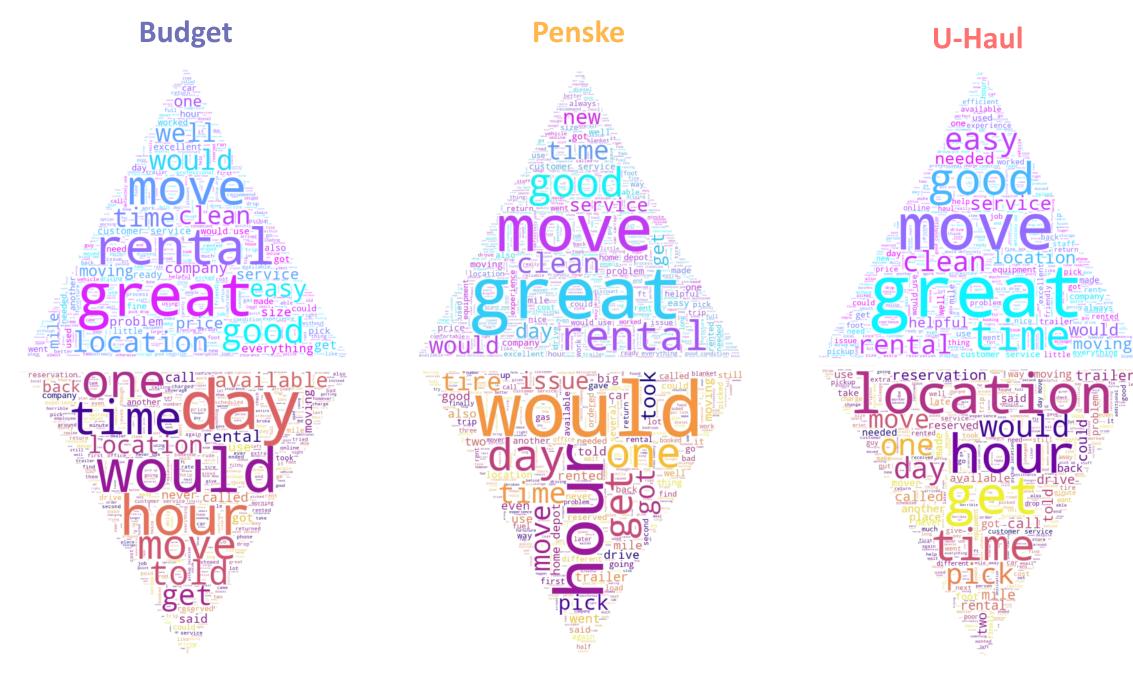


 Some words need to be removed from the cloud

```
my_stopwords=
['truck', 'uhaul',
'penske', 'budget']
```







All happy families are alike; each unhappy family is unhappy in its own way......

### **U-Haul**



Author: Francesca Di Meglio



- Get a price break if U-Haul® changes your reservation on you
- Flexible policy for changes you make to your reservation
- Same-day rental
- Special offers for customers
- Safety features on the equipment



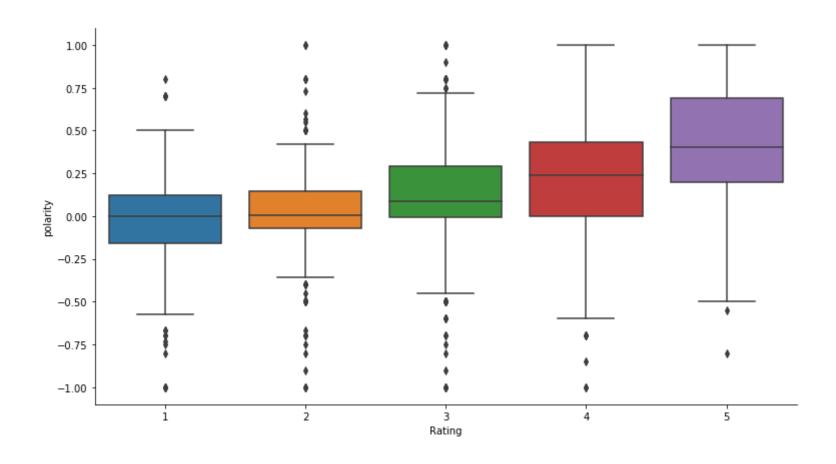
#### CONS

- Sly tactics could cause you to spend more than you want (or need to)
- Unreliable online customer service
- High possibility of being unable to pick up at your preferred location





## **Sentiment Analysis**



## **Co-Occurrence Probabilities: Word Embedding**

 $window_size = 2$ 

```
In [61]: word_NN('truck'), word_NN('uhaul'), word_NN('great')
Out[61]: ('move', 'penske', 'good')
In [64]: word NN('locate'), word NN('service'), word NN('rental'), word NN('easy')
Out[64]: ('extend', 'customer', 'drop', 'quick')
In [63]: word NN('get'), word NN('day'), word NN('time'), word NN('would')
Out[63]: ('someone', 'late', 'several', 'recommend')
In [70]: word NN('clean'), word NN('drive'), word NN('got'), word NN('issue')
Out[70]: ('ran', 'driving', 'one', 'problem')
In [71]: word_NN('charge'), word_NN('cost'), word_NN('reservation'), word_NN('tire')
Out[71]: ('additional', 'mileage', 'confirmed', 'repair')
In [99]: word_NN('phone'), word_NN('deal'), word_NN('price'), word_NN('job')
Out[99]: ('call', 'with', 'best', 'wonderful')
```

# **Future Work**



VS



**Rental Trucks** 



**Moving Containers** 









