



Data Glacier

Your Deep Learning Partner

Go-to-Market (G2M) Cab Industry Case Study

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Data and Analytics Team | March 11th, 2021



Agenda

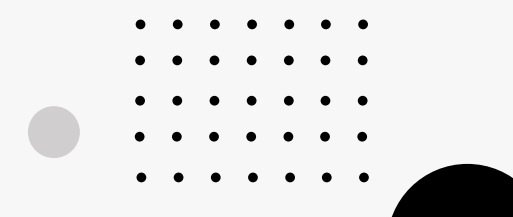
- Cab Industry Background
- 2 Company Analysis: Pink and Yellow Cab
- Analysis
 - Data Understanding and Overview
 - Macro → Micro Profit Analysis

Cab Industry Background





Industry Disruption in the Cab Industry

- Companies like **Uber and Lyft** have disrupted the Cab Industry with apps and on-demand ride services. Effects include:
 - Medallion taxi drivers committing suicide.
 - “By Q1 2018, **ride-hailing had grabbed 70.5% of the market**, with rental cars getting 23.5% and taxis just 6%.” ~*Forbes*₁
 - Taxi drivers lost consistent revenue and initial investment.
 - Cab companies have since responded by rolling out their own apps to take back market share.
- 

The slide features a white background with various abstract geometric shapes in yellow, black, and grey. These shapes are scattered around the central text, including circles, triangles, rectangles, and dotted lines. Some shapes are solid, while others are outlines or dotted patterns.

Is the Cab Industry still profitable? Pink Cab or Yellow Cab Company?



Let's FIND OUT!

Analysis - Data Overview and Understanding

Data Overview

MASTER DATA, composed of...

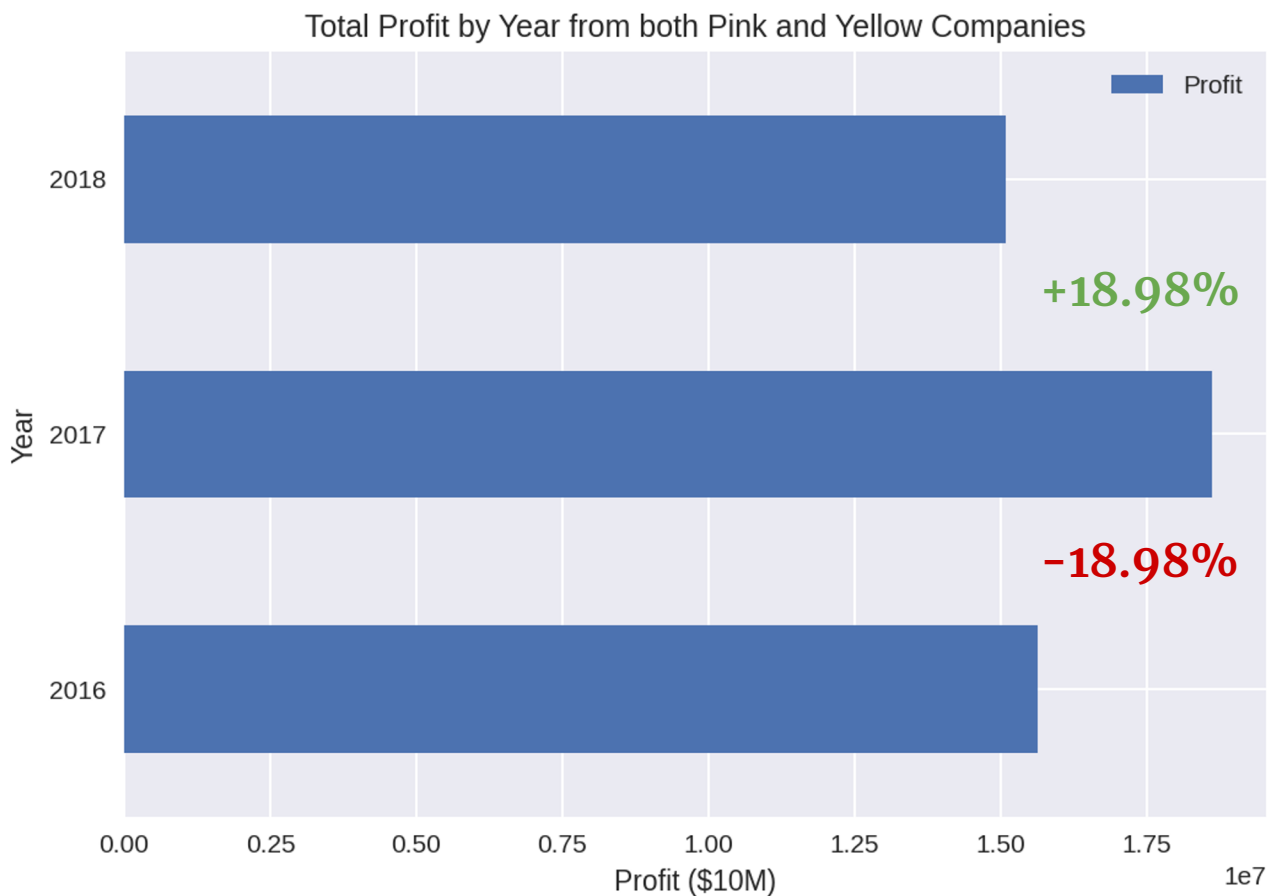
- Cab_Data.csv → Routes and Prices
- Customer_ID.csv → Customer info
- Transaction_ID.csv → Payment Type
- City.csv → City Statistics

Total Features = 14

Feature Understanding

2 Main Companies: Pink and Yellow

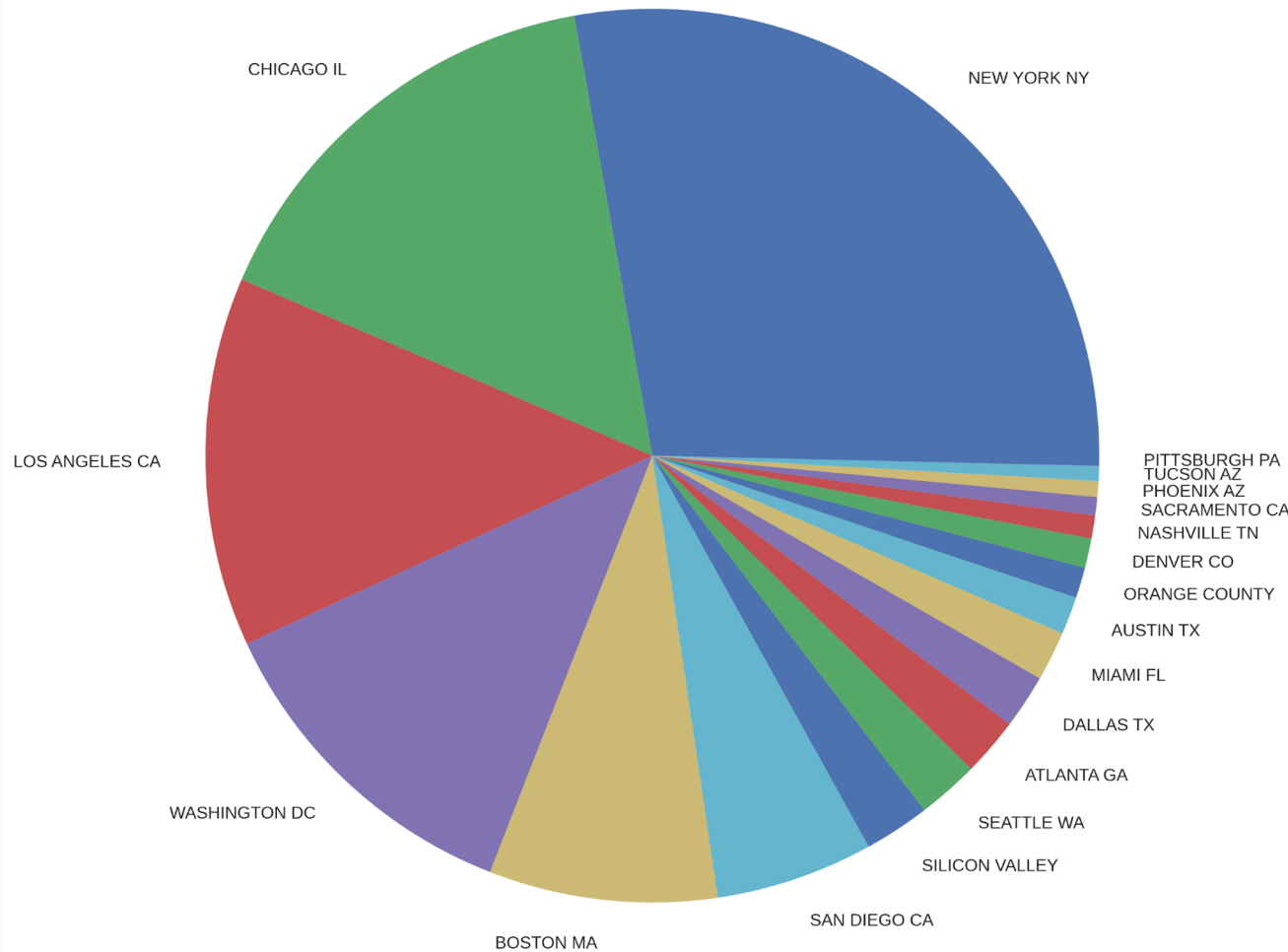
- Generated **PROFIT** feature as (Price_Charged - Cost_of_Trip)
- Generated Seasonality Features: Month, Holodate, Timezone



3 Year Profitability

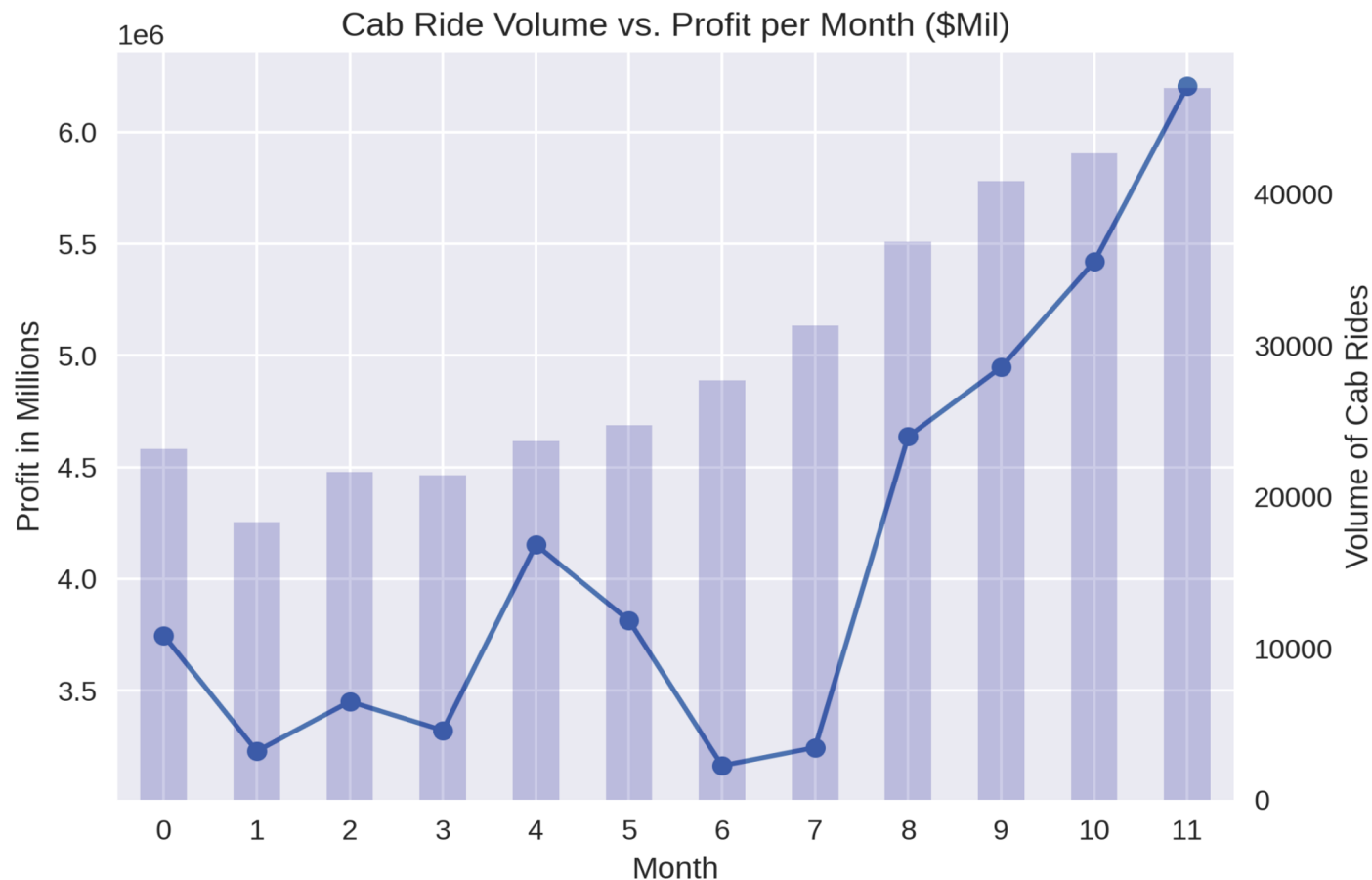
2017 was the *most profitable* year generating **\$17.5M** in Profit.

Distribution of Ride Volume by City



Company Ride Volumes

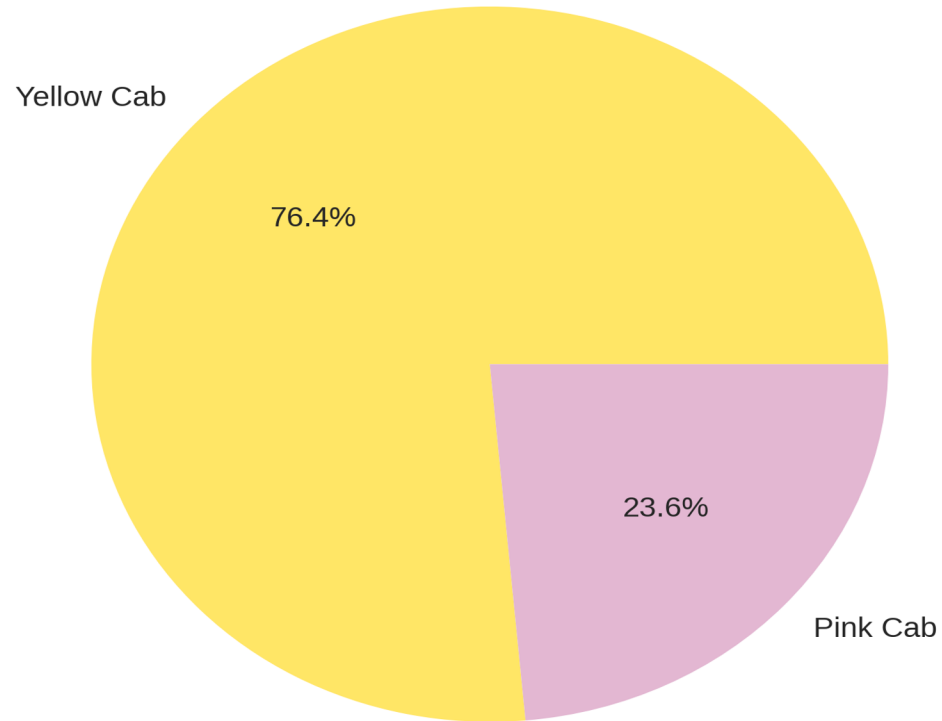
New York, Chicago and Los Angeles have >50% of the Ride Share Volume.



Monthly Seasonality

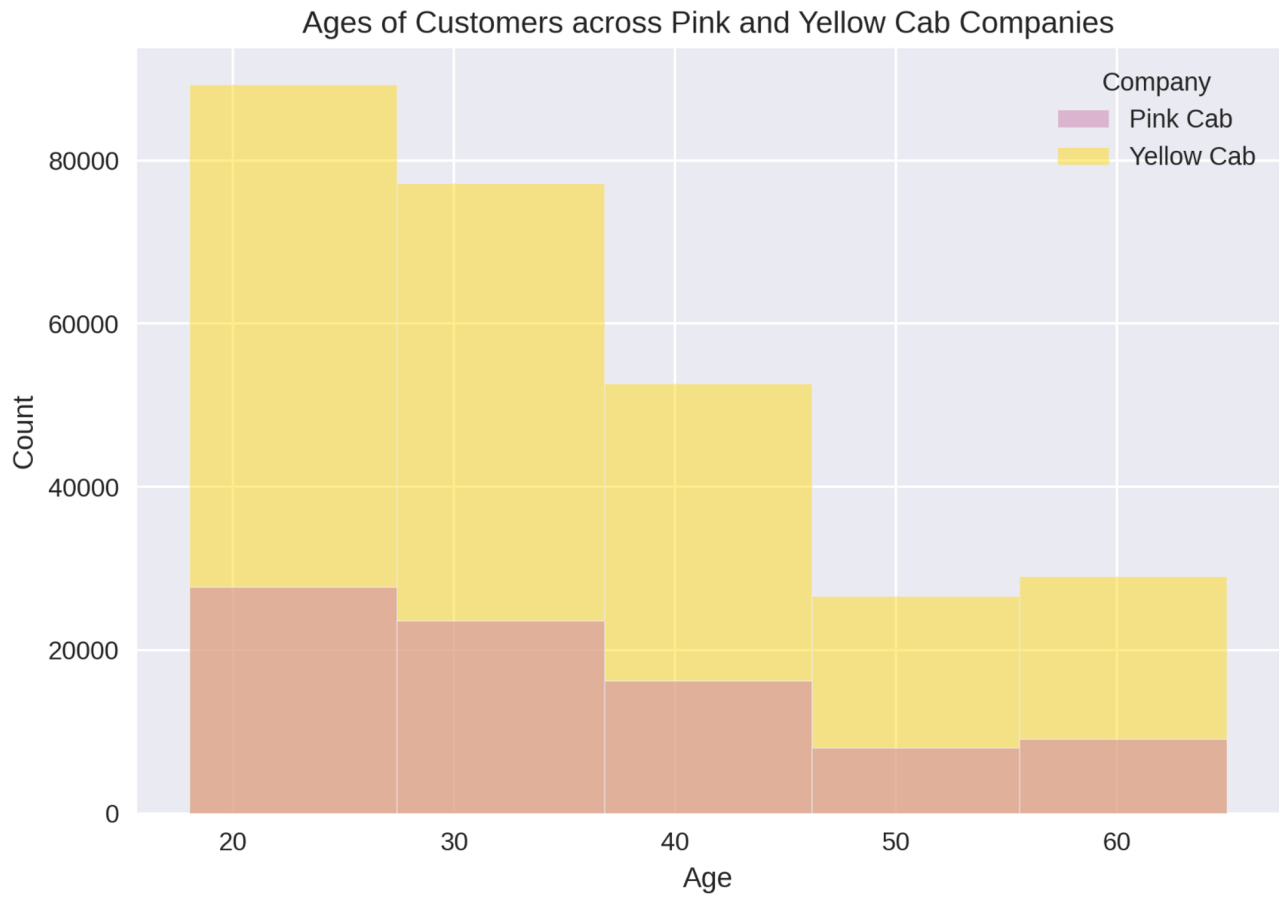
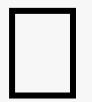
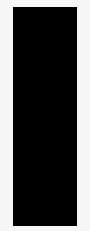
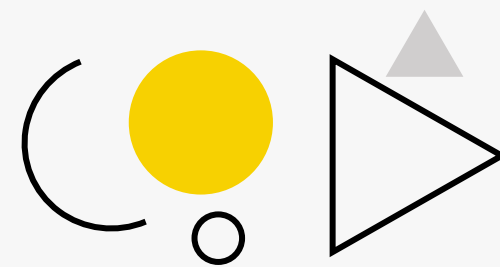
Winter was by far the **most profitable** season followed by the summer. Additionally, *ride volume increased* as the year went on.

Distribution of Cab Trips by Company



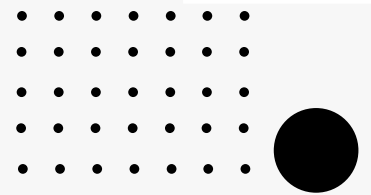
Company Ride Volumes

Yellow Cab Company
has ~3x the Ride
Volume of the **Pink**
Cab Company.



Customer Demographics

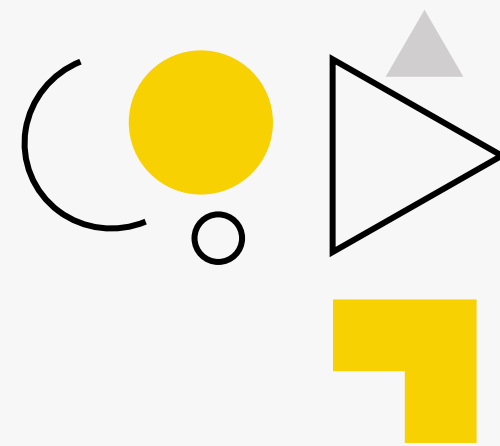
The younger, **Millennials and Gen Zs** are *more frequent customers* for both Companies.



Company Ride Volumes

Company	Total Profit	Total Cost of Rides	Avg Profit/Ride	Avg Cost/Ride	Profit/Cost Ratio
Pink Cab	5.307328e+06	2.102092e+07	62.652174	248.148682	0.252478
Yellow Cab	4.402037e+07	8.183351e+07	160.259986	297.922004	0.537926

1. While *Total Costs* are 4x greater for Yellow Cab, the **Average Cost/Ride** is comparable with only a ~\$49 difference.
2. According to the *Profit/ Cost Ratio*: Yellow Cab is 2x is efficient at producing a profit



Customer Retention by Company

16.9%

83.1%

43.6%

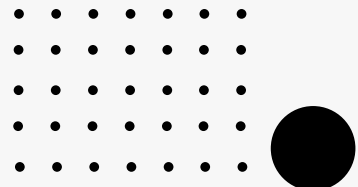
4.4%

95.6%

Customers Used The
Company **ONLY 1x**

84.2%
Customers Used The
Company **> 1x**

Customers Used The
Company **> 5x**



Invest in **Yellow Cab** Company

- ✓ Greater Market Share
- ✓ Higher Demographic Coverage
- ✓ Greater Profit/Cost Ratio
- ✓ Industry Best Profit per Ride
- ✓ Best Customer Retention amongst the Cab Companies

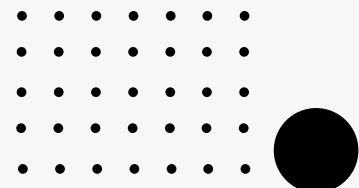


GitHub:

[https://github.com/siddley1001/
DG_internship](https://github.com/siddley1001/DG_internship)

GitHub Link to Code and Data

- **ReadMe:** Motivation and Requirements
- **EDA:** Visualizations and Feature Engineering
- **Machine Learning** Regression Pipelines



The background is a vibrant yellow, decorated with various abstract geometric shapes in black and white. These include circles, triangles, rectangles, and lines, some of which are solid and others outlined. There are also patterns of small dots arranged in grids or vertical columns. The overall aesthetic is modern and minimalist.

THANK YOU!

Email Questions and Collaboration Requests
to: vanamsid@live.unc.edu



CREDITS.

- 1) <https://www.forbes.com/sites/michaelgoldstein/2018/06/08/uber-lyft-taxi-drivers/?sh=102eff59fod9>
- 2) Data provided by the Data Glacier Team.