

Databases & SQL for Analysts
Final Project

BY EUIKYU KIM | AUG 27, 2023

ROCKBUSTER STEALTH

BUSINESS ANALYSIS



TABLE OF CONTENTS

1. INTRODUCTION

- 1.1 Motivation
- 1.2 Objective
- 1.3 Key questions
- 1.4 Things to learn from the questions

2. DATA OVERVIEW

- 2.1 Entity relationship
- 2.2 Numerical
- 2.3 Non-numerical

3. ANALYSIS

3.1 ANALYSIS 1 / 2 / 3

- 3.1.1 Least / most revenue
- 3.1.2 Average rental duration
- 3.1.3 Where customers based in

3.2 ANALYSIS 4

- 3.2.1 Customers by country
- 3.2.2 Customers by city
- 3.2.3 Customers by region

3.3 ANALYSIS 5

- 3.3.1 Correlation
- 3.3.2 Overall sales figures

4. CONCLUSION

- 4.1 Summary
- 4.2 Recommendations

5. END OF PRESENTATION





INTRODUCTION

MOTIVATION | OBJECTIVE | KEY QUESTIONS | THINGS TO LEARN FROM THE QUESTIONS



MOTIVATION

INTRODUCTION

- The Rockbuster Stealth is facing stiff competition from streaming services such as Netflix and Amazon Prime.
- The Rockbuster Stealth management team is planning to use its existing movie licenses to launch an online video rental service in order to stay competitive.





OBJECTIVE

GOAL OF THIS ANALYSIS

Provide Rockbuster Stealth Management Board
the data-driven answers
for the next year's company strategy for the new online video service.



KEY QUESTIONS

1. Which movies contributed the most/least to revenue gain?
2. What was the average rental duration for all videos?
3. Which countries are Rockbuster customers based in?
4. Where are customers with a high lifetime value based?
5. Do sales figures vary between geographic regions?





KEY QUESTIONS

THINGS TO LEARN FROM THE QUESTIONS

1. Which movies contributed the most/least to revenue gain?

2. What was the average rental duration for all videos?

→ **Trends & rental cycle of the product**

3. Which countries are Rockbuster customers based in?

4. Where are customers with a high lifetime value based?

5. Do sales figures vary between geographic regions?

→ **Number / loyalty of the customers &
revenue by the region**



DATA OVERVIEW

ENTITY RELATIONSHIP | NUMERICAL | NON-NUMERICAL



ENTITY RELATIONSHIP

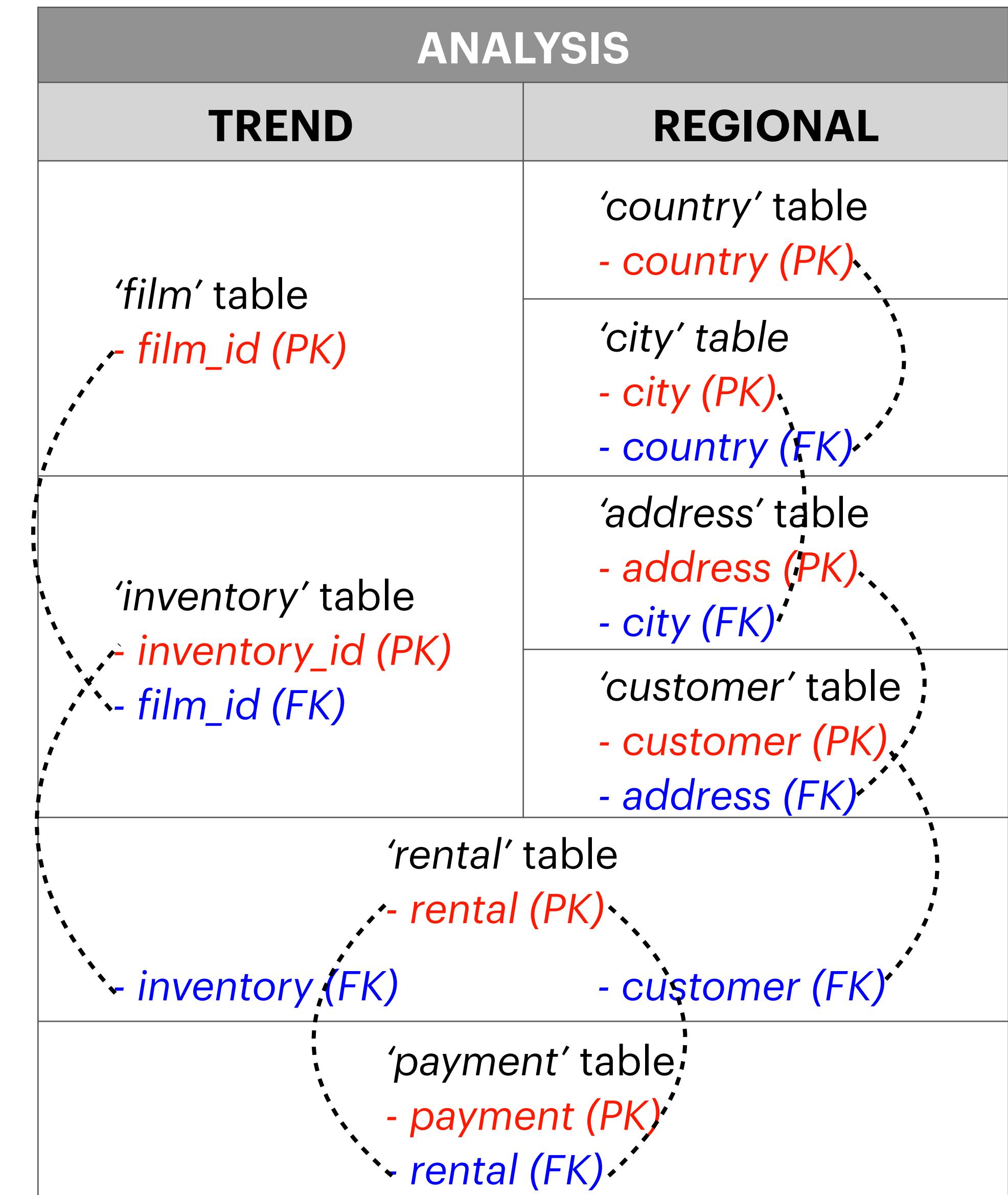
DATA OVERVIEW 1

→ Trends & rental cycle of the product (TREND)

- INNER JOIN:
‘film’, ‘inventory’, ‘rental’, ‘payment’

→ Number/loyalty of the customers & revenue by the region (REGIONAL)

- INNER JOIN:
‘country’, ‘city’, ‘address’, ‘customer’,
‘rental’, ‘payment’



PK: Primary Key, FK: Foreign Key



NUMERICAL

DATA OVERVIEW 2

	RENTAL DURATION (DAYS)	RENTAL RATE (\$)	LENGTH (MINUTES)	REPLACEMENT COST (\$)	COUNT OF ROW
MINIMUM	3	0.99	46	9.99	-
MAXIMUM	7	4.99	185	29.99	
MEAN	5	2.98	115	19.98	
COUNT	1,000	1,000	1,000	1,000	1,000



NON-NUMERICAL

DATA OVERVIEW 3

	RELEASE ^{1*} YEAR	LANGUAGE	RATING	LAST ^{2*} UPDATE	COUNT OF ROW
EARLIEST	2006	-	-	2013-05-26 14:50:58.9 51	
LATEST	2006	-	-	2013-05-26 14:50:58.9 51	-
MODE	2006	ENG	PG-13	2013-05-26 14:50:58.9 51	
COUNT	1,000	1,000	1,000	1,000	1,000

RELEASE YEAR^{1*}:

Collection is limited as it only includes films released in 2006.

LAST UPDATE^{2*}:

All customer profiles created on the same date. This could mean there is a lot of outdated customer information.



ANALYSIS 1/2/3

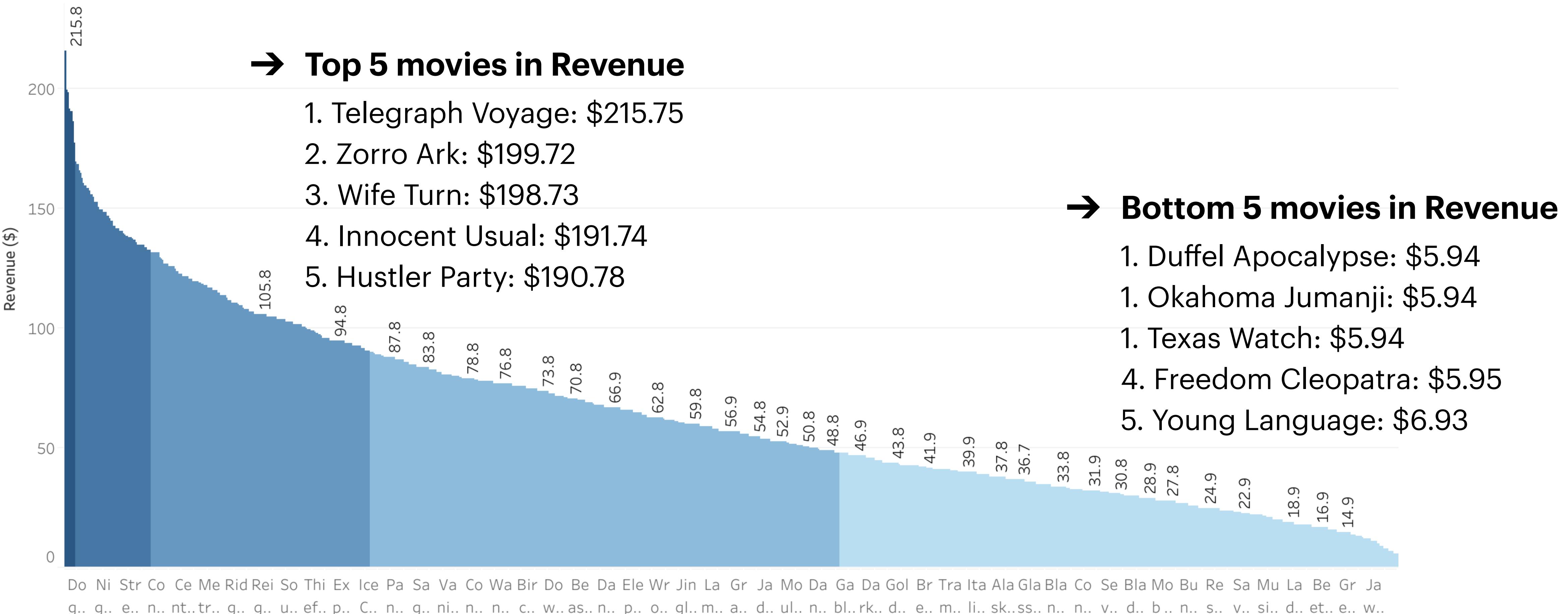
THE LEAST/MOST REVENUE | AVERAGE RENTAL DURATION | WHERE CUSTOMERS BASED IN



ANALYSIS 1

THE LEAST / MOST REVENUE

Question 1. Which movies contributed the least/most revenue gain? ↗





ANALYSIS 2

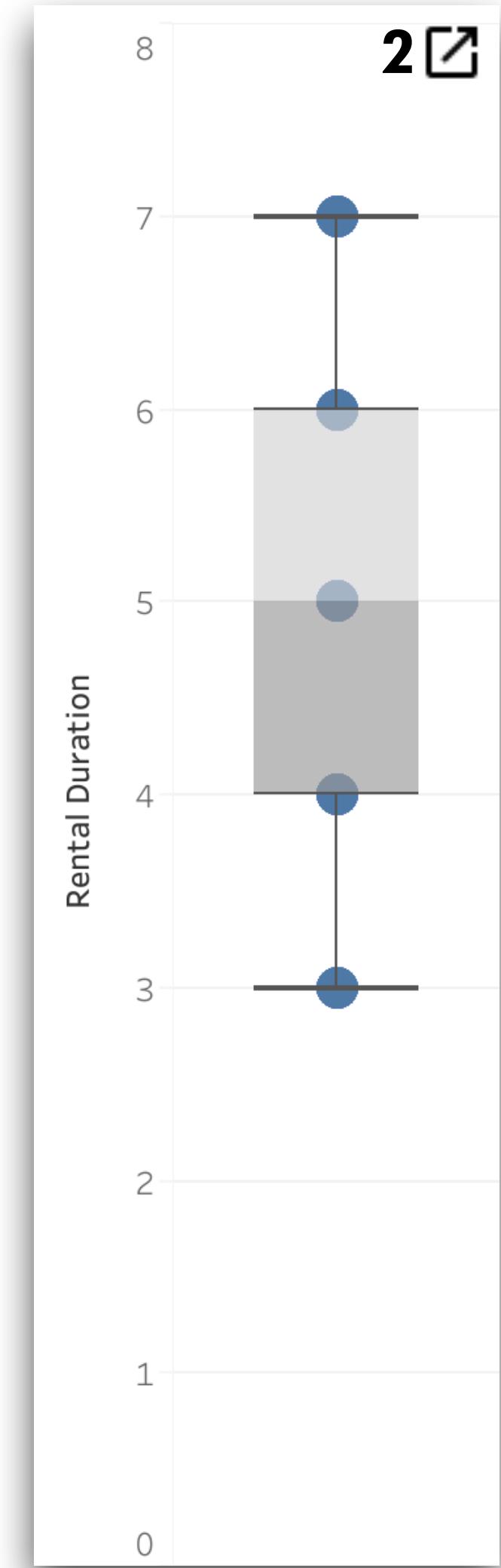
AVERAGE RENTAL DURATION

Question 2. What was the average rental duration for all videos? 1 2

→ Average Rental Duration
is 5 Days

Maximum: 7 Days

Minimum: 3 Days

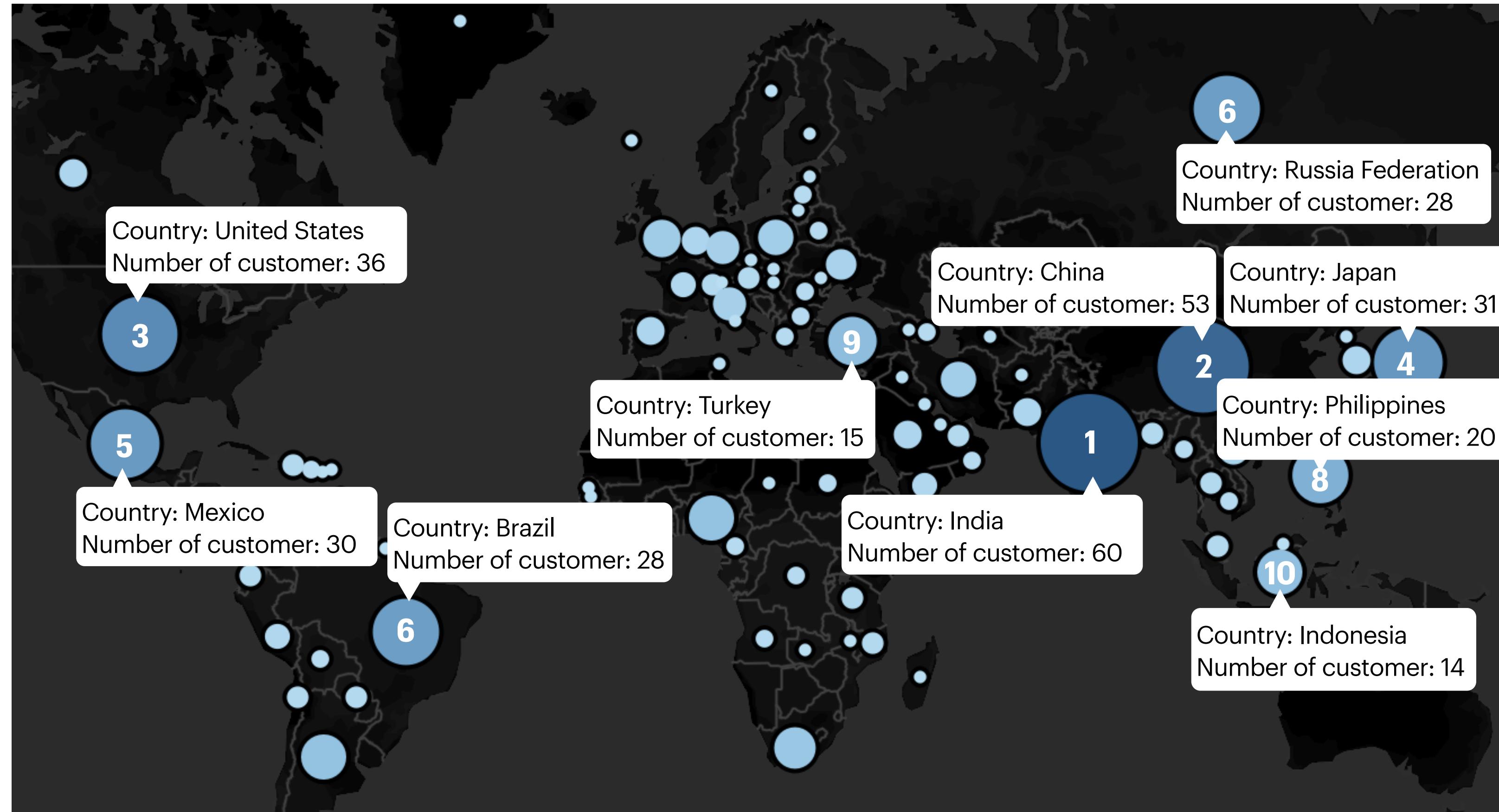




ANALYSIS 3

WHERE CUSTOMERS BASED IN

Question 3. Which countries are Rockbuster customers based in? 



→ Top 10 countries where Rockbuster customers based in

1. India: 60
2. China: 53
3. United States: 36
4. Japan: 31
5. Mexico: 30
6. Brazil: 28
6. Russia Federation: 28
8. Philippines: 20
9. Turkey: 15
10. Indonesia: 14



ANALYSIS 4

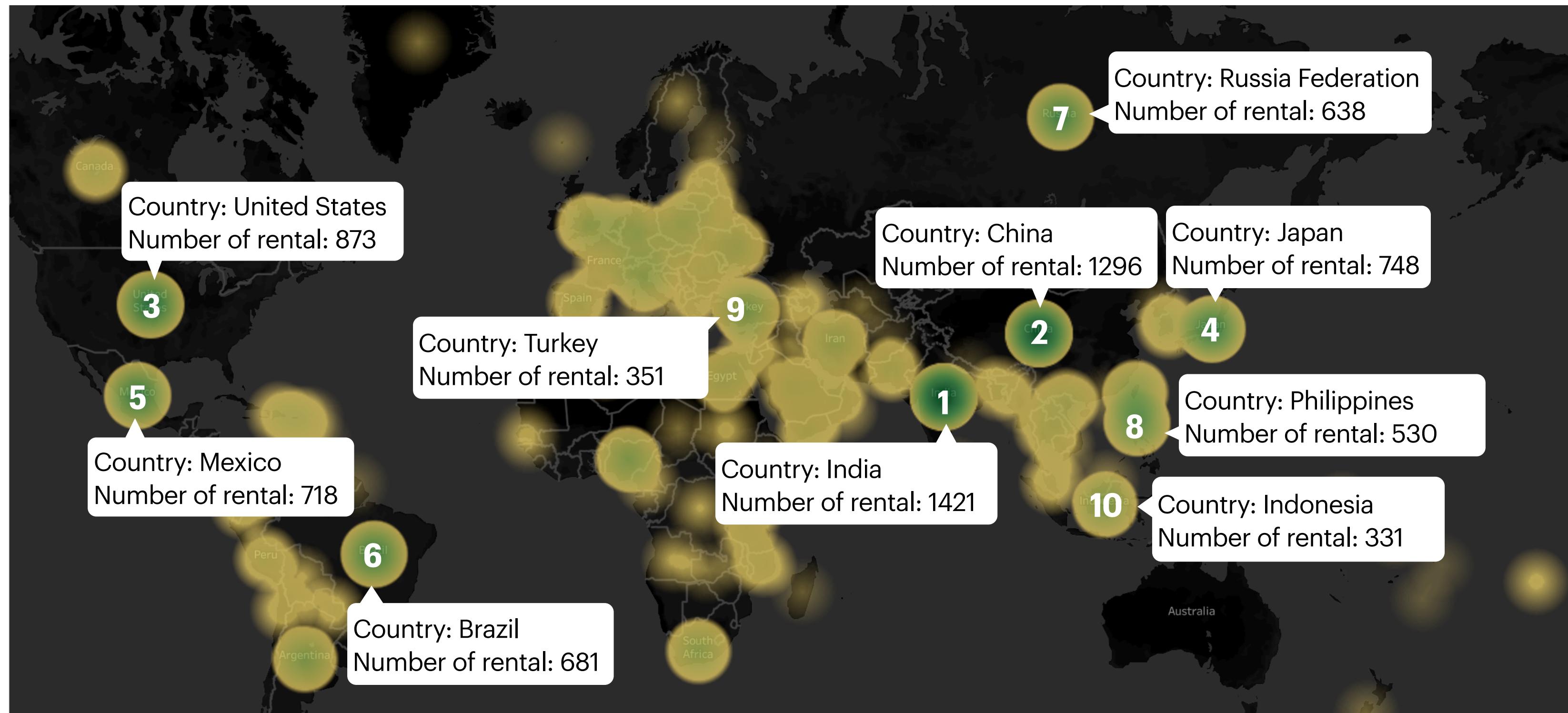
CUSTOMERS BY COUNTRIES / CITIES / REGION



ANALYSIS 4.1

CUSTOMERS BY COUNTRIES

Question 4. Where are **customers with a high lifetime value** based? ↗



→ Top 10 countries (and cities) of customers with a high lifetime value based

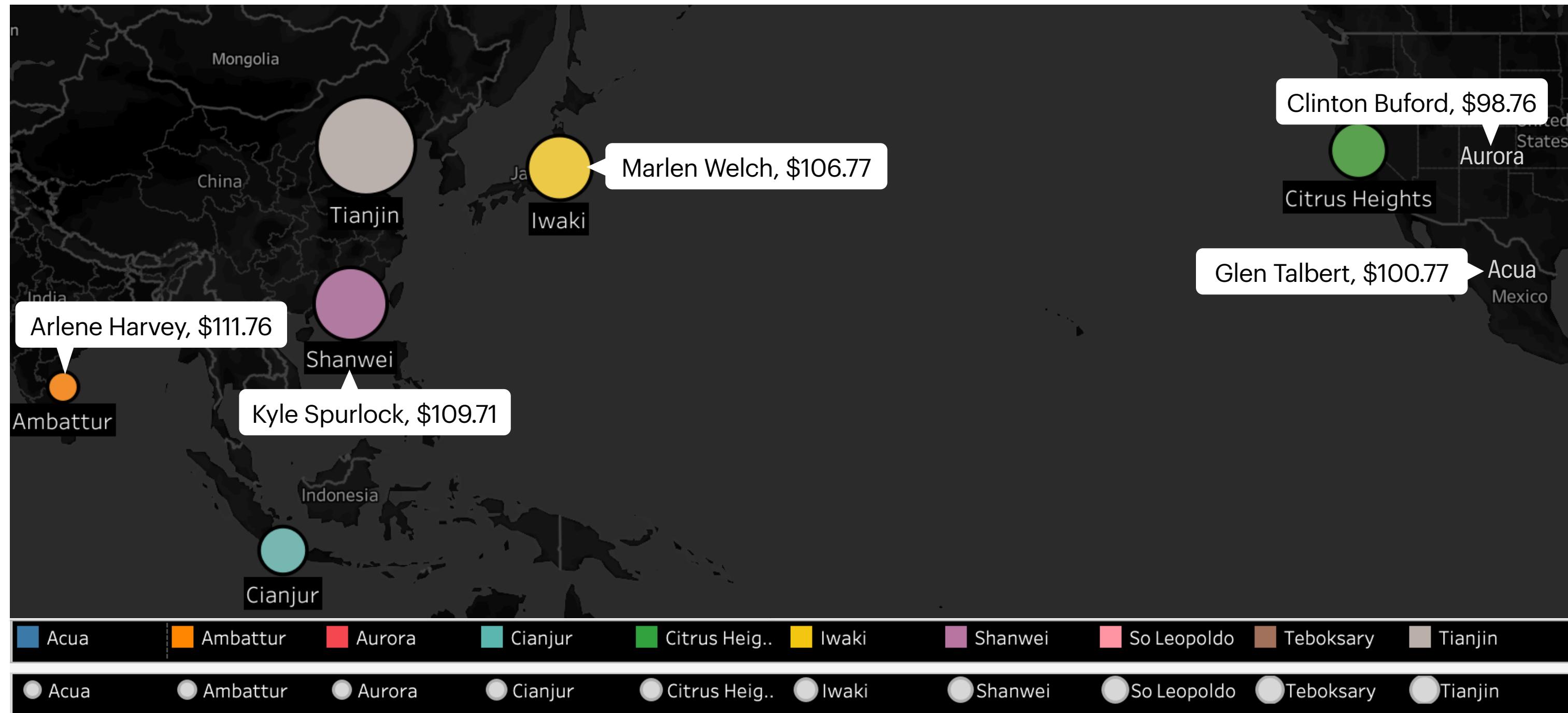
1. India (Ambattur)
2. China (Shanwei, Tianjin)
3. United States (Citrus Heights, Aurora)
4. Japan (Iwaki)
5. Mexico (Acua)
6. Brazil (So Leopoldo)
6. Russia Federation (Teboksary)
8. Philippines
9. Turkey
10. Indonesia (Cianjur)



ANALYSIS 4.2

CUSTOMERS BY CITIES

Question 4. Where are **customers with a high lifetime value** based? ↗



→ **Top 5 cities
within top 10 countries**

1. Aurora (United States)
2. Acua (Mexico)
2. Iwaki (Japan)
2. Ambattur (India)
2. Shanwei (China)

→ **Top 5 customers
within top 10 cities**

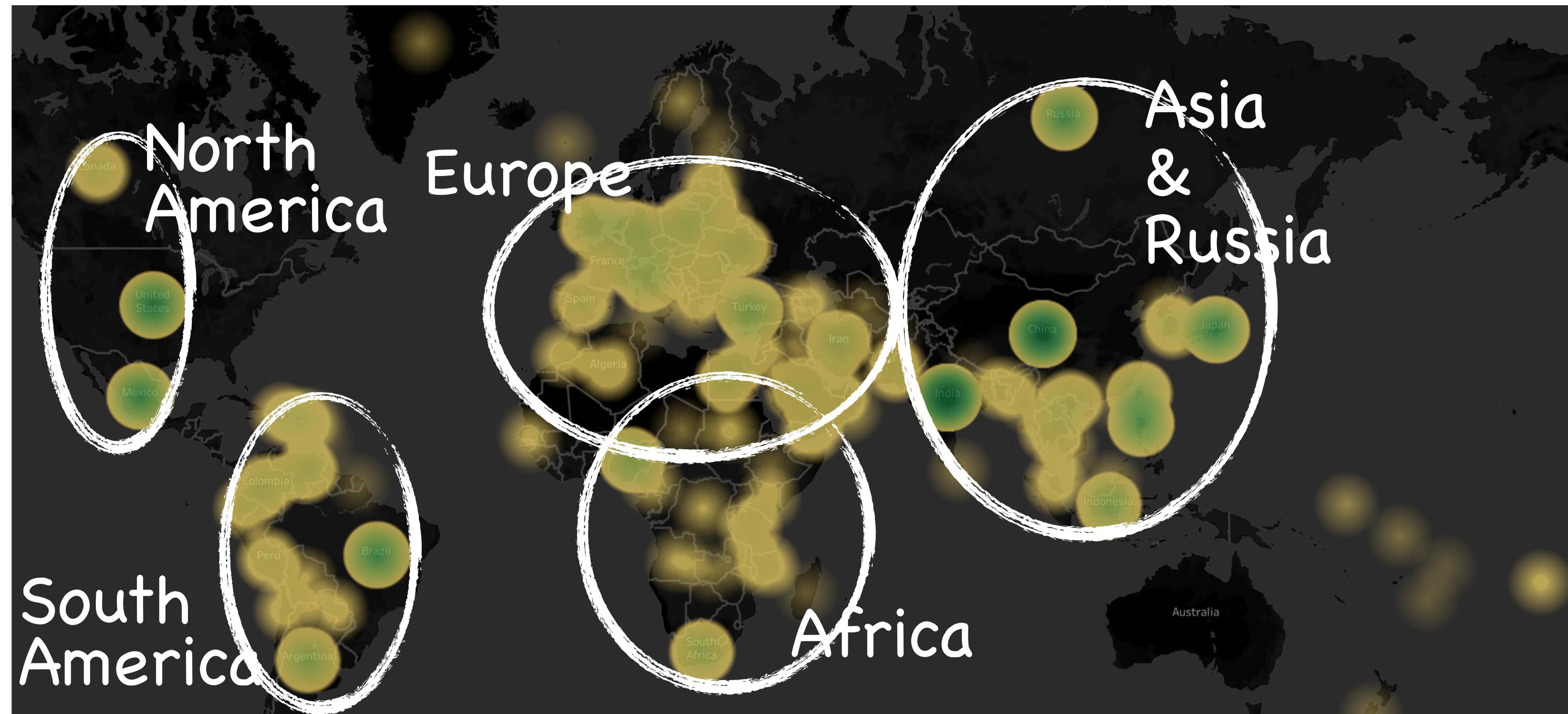
1. Arlene Harvey (Ambattur, India)
2. Kyle Spurlock (Shanwei, China)
3. Marlene Welch (Iwaki, Japan)
4. Glen Talbert (Acua, Mexico)
5. Clinton Buford (Aurora, U.S.)



ANALYSIS 4.3

CUSTOMERS BY REGION

Question 4. Where are **customers with a high lifetime value** based? ↗



→ **Customers with a high lifetime value based in region by density**

1. Asia & Russia
2. North America
3. South America
4. Europe
5. Africa

NOTE

- * Asia has the highest density.
- * Europe has the widest but lighter density.
- * Oceania has no record.



ANALYSIS 5

CORRELATION | OVERALL



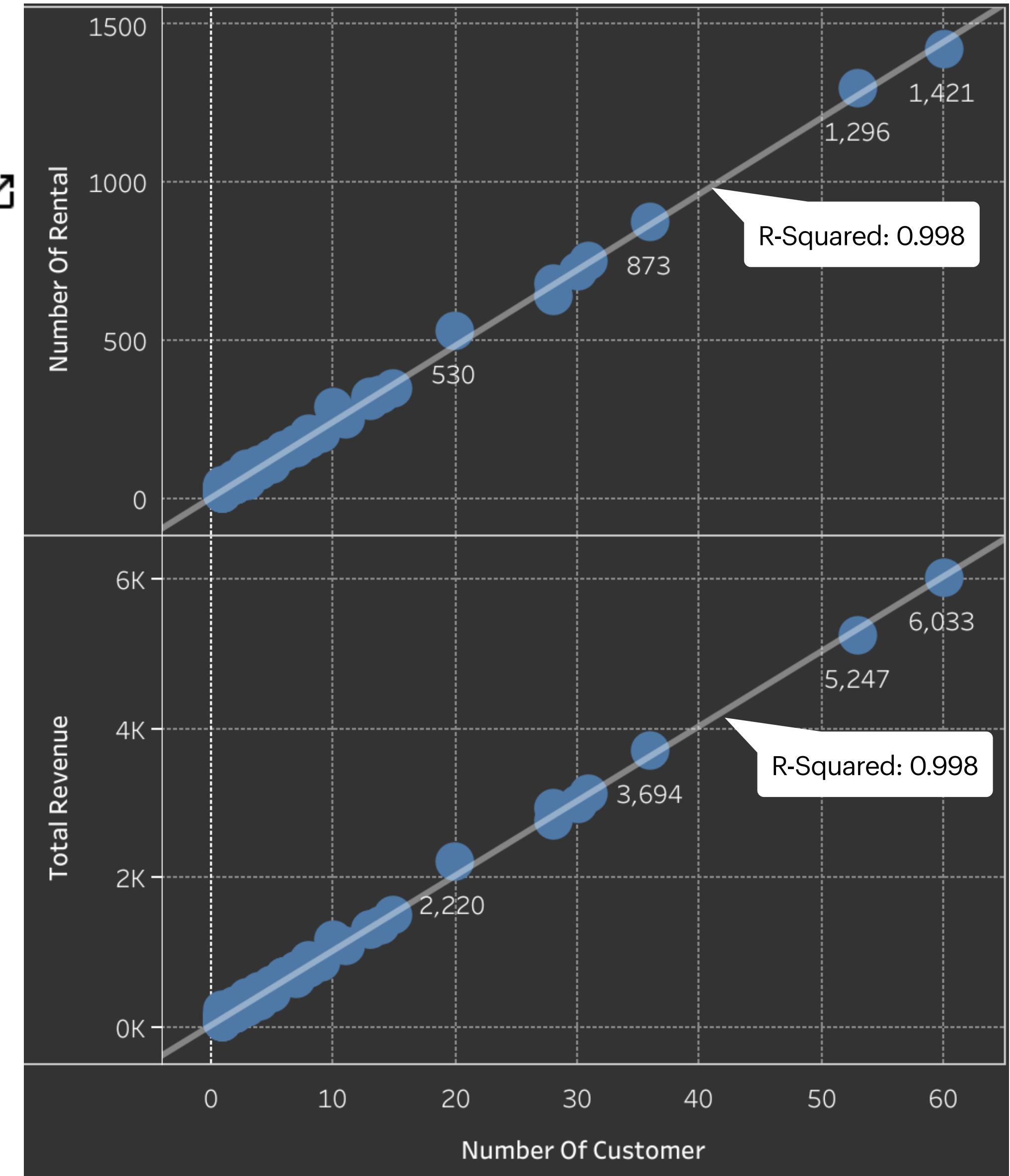
ANALYSIS 5.1

CORRELATION

Question 5. Do **sales figures** vary between geographic regions?

→ Yes, sales figures are vary between the regions.

- Based on this analysis, the number of all three variables;
 - customers
 - rentals,
 - and sales have a
- Very Strong Correlation**
- R-Squared = 0.998 | Correlation = 0.999 for both charts.





ANALYSIS 5.2

OVERALL SALES FIGURES

Question 5. Do **sales figures** vary between geographic regions? ↗

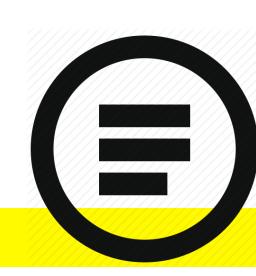
India Cust. 60 Rent. 1,421 Rev. 6,033	United States Cust. 36 Rent. 873 Rev. 3,694	Brazil Cust. 28 Rent. 681 Rev. 2,919	Turkey Cust. 15 Rent. 351 Rev. 1,498	Indonesia Cust. 14 Rent. 331 Rev. 1,353	Nigeria Cust. 13 Rent. 308 Rev. 1,315	Argentina Cust. 13 Rent. 320 Rev. 1,299
China Cust. 53 Rent. 1,296 Rev. 5,247	Japan Cust. 31 Rent. 748 Rev. 3,122	Russian Federation Cust. 28 Rent. 638 Rev. 2,766	Taiwan Cust. 10 Rent. 290 Rev. 1,155	Poland Cust. 8 Rent. 184 Rev. 786	Italy Cust. 7 Rent. 174 Rev. 753	Germany Cust. 7 Rent. 176 Rev. 741
Mexico Cust. 30 Rent. 718 Rev. 2,985		Philippines Cust. 20 Rent. 530 Rev. 2,220	South Africa Cust. 11 Rent. 254 Rev. 1,069	Ukraine Cust. 6 Rent. 147	Venezuela Cust. 7 Rent. 157 Rev. 632	Canada Cust. 5 Rent. 130 Rev. 560
			Iran Cust. 8 Rent. 204 Rev. 878	Colombia Cust. 6 Rent. 146	Netherlands Cust. 5 Rent. 127	Spain Cust. 5 Rent. 120 Rev. 514
			United Kingdom Cust. 9 Rent. 203 Rev. 849	Egypt Cust. 6 Rent. 152	South Korea Cust. 5 Rent. 123	

Top 5 countries in overall figures

1. India
 - Cust.: 60 | Rent.: 1,421 | Rev.: 6,033
2. China
 - Cust.: 53 | Rent.: 1,296 | Rev.: 5,247
3. United States
 - Cust.: 36 | Rent.: 873 | Rev.: 3,694
4. Japan
 - Cust.: 31 | Rent.: 748 | Rev.: 3,122
5. Mexico
 - Cust.: 30 | Rent.: 718 | Rev.: 2,985

FILTER:

Number of customers, 'Over 500'



CONCLUSION

SUMMARY | RECOMMENDATIONS



SUMMARY

→ Top 5 movies

MOVIE TITLE	REVENUE
Telegraph Voyage	\$215.75
Zorro Ark	\$199.72
Wife Turn	\$198.73
Innocent Usual	\$191.74
Hustler Party	\$190.78

→ Top 10 countries

COUNTRY	CUSTOMER	RENTAL	REVENUE
India	60	1,421	\$6,033
China	53	1,296	\$5,247
United States	36	873	\$3,694
Japan	31	748	\$3,122
Mexico	30	718	\$2,985
Brazil	28	681	\$2,919
Russia Federation	28	638	\$2,766
Philippines	20	530	\$2,220
Turkey	15	351	\$1,499
Indonesia	12	331	\$1,353

→ Average Rental Duration

- 5 Days

→ Number of Customers,
Rental,
Revenue

have a very strong correlation
and vary by region.



RECOMMENDATIONS

→ PRIORITIES OF THE MARKETS TO BE FOCUSED ON:

- PRIORITY TARGET MARKET:
Asia (India, China, Japan, Philippines, Indonesia)
- SECOND-PRIORITY MARKET:
Americas (United States, Mexico, Brazil)
- THIRD OPPORTUNITY MARKET:
Europe (Turkey, Germany, etc.)
- MARKETS TO PIONEER:
Middle East, Africa, Oceania

→ FEES AND DURATIONS:

- **For rentals**
 - On a \$2.98 for 5 days basis,
 - vary by its popularity.
- **For subscriptions**
 - Vary by the contract terms (eg. 1, 3, 6, or 12-months),
 - and number of account holders (eg. family, couple, single, or organization).

→ CUSTOMER'S SATISFACTION PLAN:

- Reward point program.
- Free movies with ads



**END OF
PRESENTATION**
THANK YOU

EUIKYU KIM
KIMICUE1@GMAIL.COM