Data Analytics Bootcamp Capstone

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- Background in Special Education
- Works at Auburn University as an administrative assistant
- Desire to transition to tech industry

Python Analysis

PROBLEM

A production company wants to make their movie a commercial success. How?

APPROACH

Analyzed given data using Python.

OUTCOME

Recommendations for producers to predict success.

PROBLEM

A production company wants to analyze "TMBd" data to predict whether a movie will be a commercial success.

Approach

Step 1 Pre - process data in Python

Step 2 Analysis in Python

Step 3 Provide recommendations

PROCESS

1 - CLEAN DATA

Null values - .isnull()
Imputation - df.loc
Removal - != 0

2 - ANALYSIS

Movies above 220K budget
Movies above 961M revenue
Top 10 movies with highest revenue
Top 10 movies with lowest budget
Correlation between popularity and budget?
Outliers

2 - ANALYSIS

Top 10 movies with highest revenues:

Avatar - *Action*, *Adventure*, *Fantasy*, *Science Fiction*

Titanic - Drama, Romance, Thriller

The Avengers - *Science Fiction*, *Action*, *Adventure*

Jurassic World - *Action*, *Adventure*, *Science Fiction*, Thriller

Furious 7 - *Action*

Avengers: Age of Ultron - *Action*, *Adventure*, *Science Fiction*

Frozen - Animation, *Adventure*, *Family*

Iron Man 3 - *Action*, *Adventure*, *Science Fiction*

Minions - *Family*, Animation, *Adventure*, Comedy

Captain America: Civil War - *Adventure*, *Action*, *Science Fiction*

Top 5 genres:

Adventure
Action
Fantasy
Science Fiction
Family

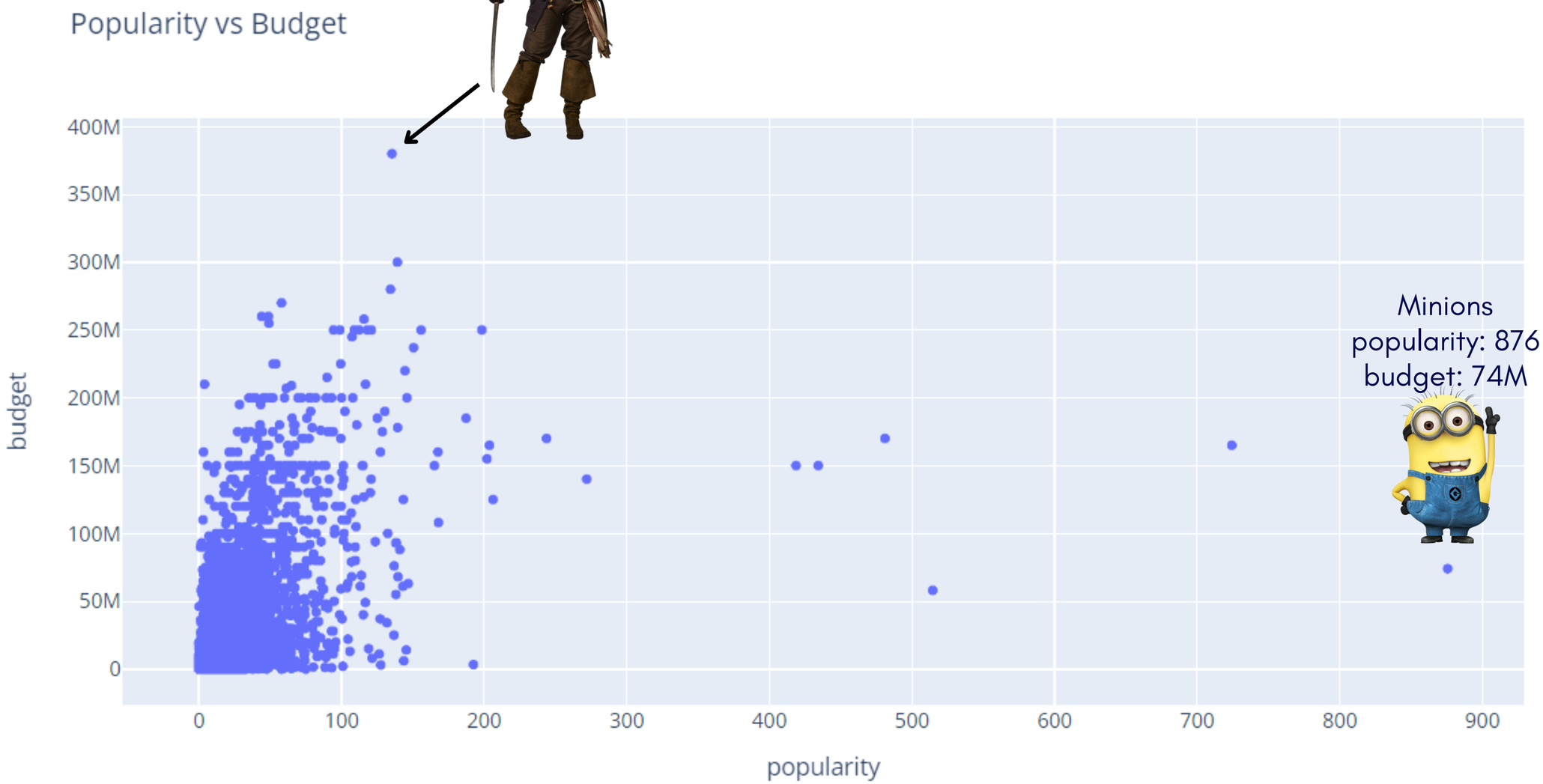
2 - ANALYSIS

Iron Man 3
popularity: 78
budget: 200M

Minions
popularity: 876
budget: 74M

2 - ANALYSIS

POTC: On Stranger Tides
popularity: 135
budget: 380M



Minions
popularity: 876
budget: 74M

2 - ANALYSIS

Top 10 movies with highest revenues:

Avatar - *Twentieth Century Fox*

Titanic - *Paramount Pictures*, *Twentieth Century Fox*

The Avengers - *Paramount Pictures*, Marvel Studios

Jurassic World - *Universal Studios*

Furious 7 - *Universal Studios*

Avengers: Age of Ultron - Marvel Studios

Frozen - Walt Disney Studios

Iron Man 3 - Marvel Studios

Minions - *Universal Pictures*, Illumination Entertainment

Captain America: Civil War - Walt Disney Studios, Marvel Studios

Top 5 Production Companies:

Warner Bros
Universal Pictures
Paramount Pictures
Twentieth Century Fox
Colombia Pictures

Recommendations

BIG BUDGET

Bigger budget generally means more popularity.

POPULAR PRODUCTION COMPANY

Big production companies have more resources for marketing and exposure.

APPEAL TO ALL

Popular genres that appeal to many groups of people: Family, Adventure, Action, etc.

Tableau Analysis

PROBLEM

A bank wants to learn how to reduce their customer churn rate.

APPROACH

Analyzed given data using Tableau and Python.

OUTCOME

Recommendations to reduce the bank's churn rate.

PROBLEM

A bank wants to produce a customer churn analysis to discover why the credit card company is not performing well.

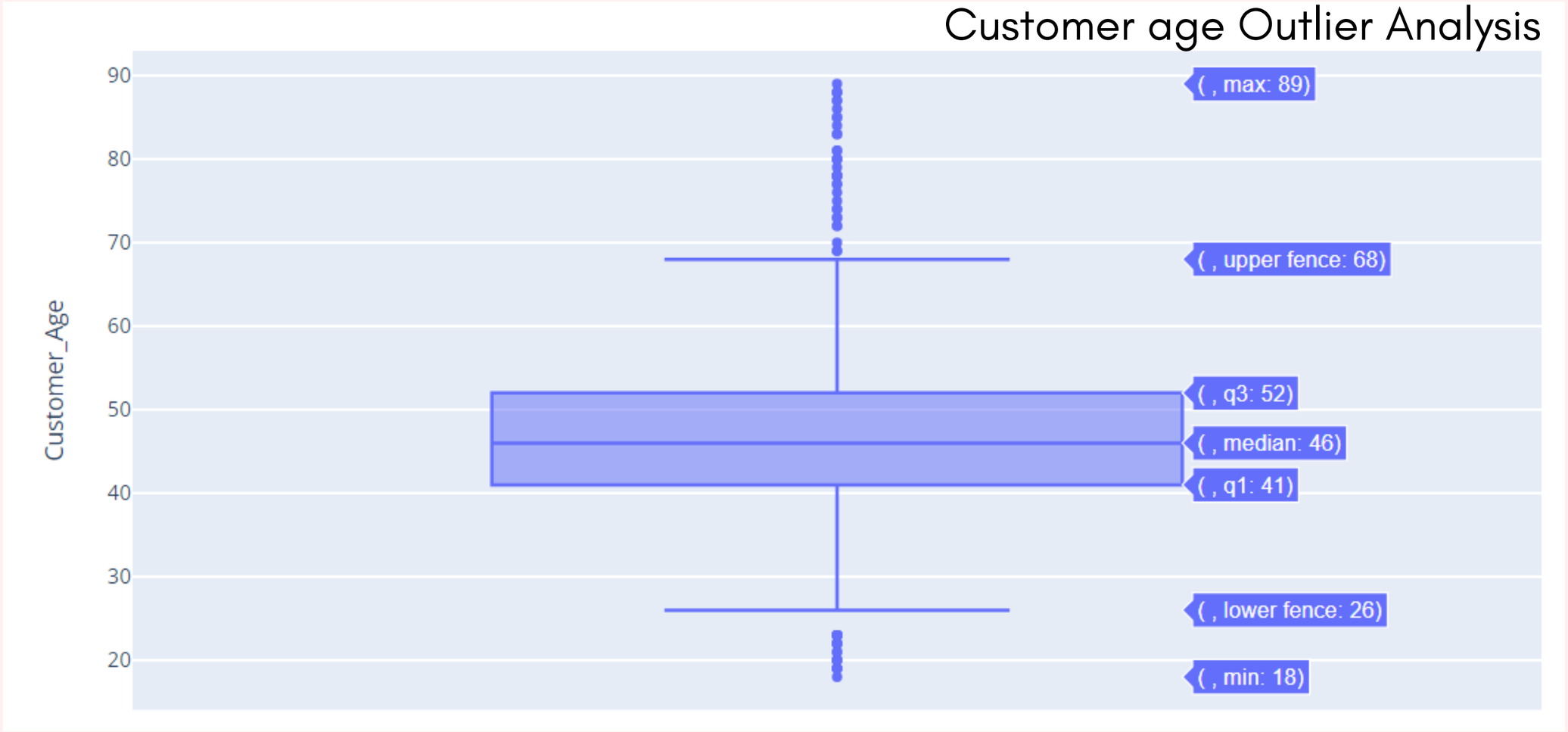
Approach

Step 1 Pre - process data in Python
Outlier Analysis

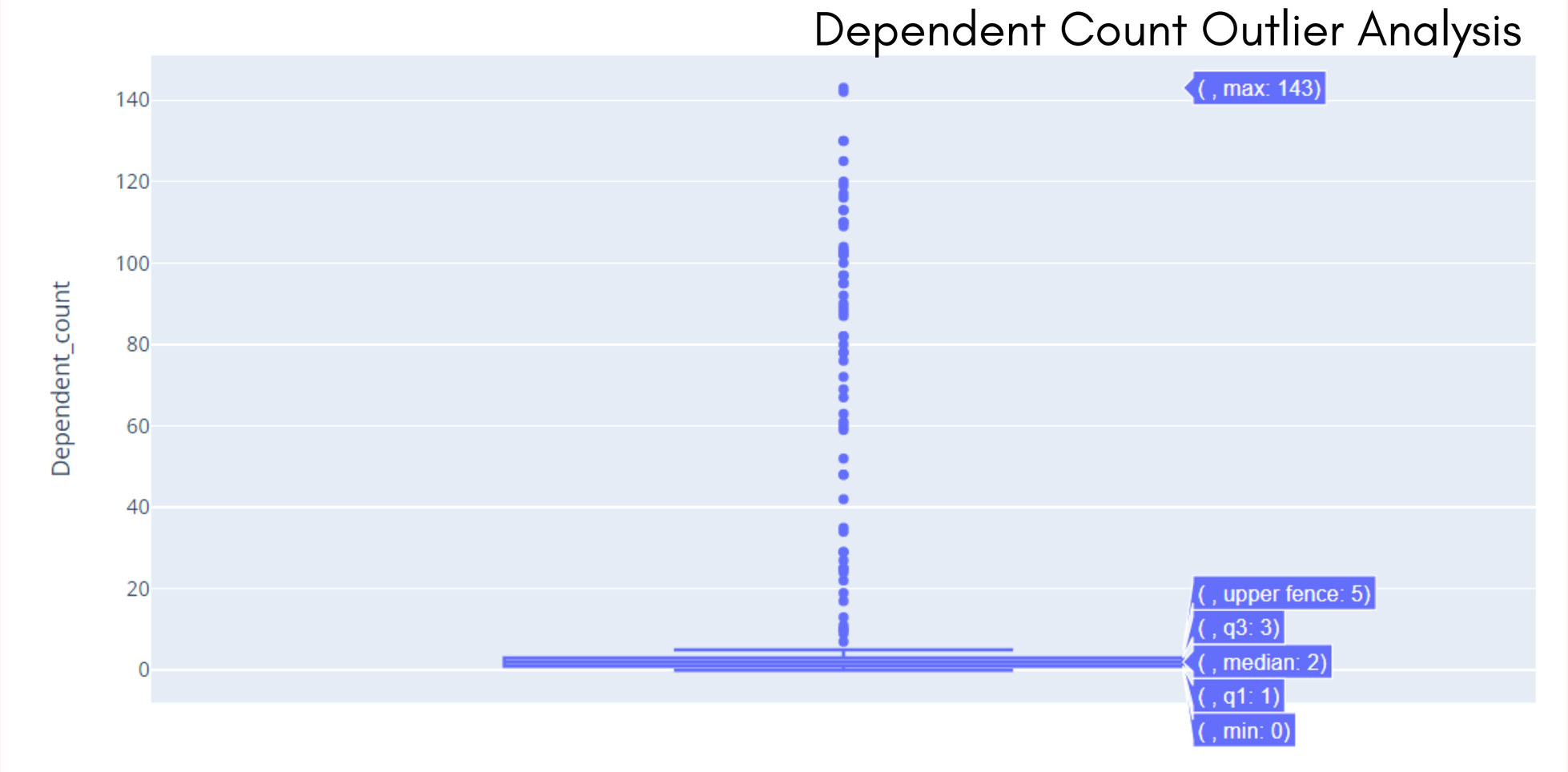
Step 2 Create visuals in Tableau

Step 3 Provide recommendations

PRE-PROCESSING

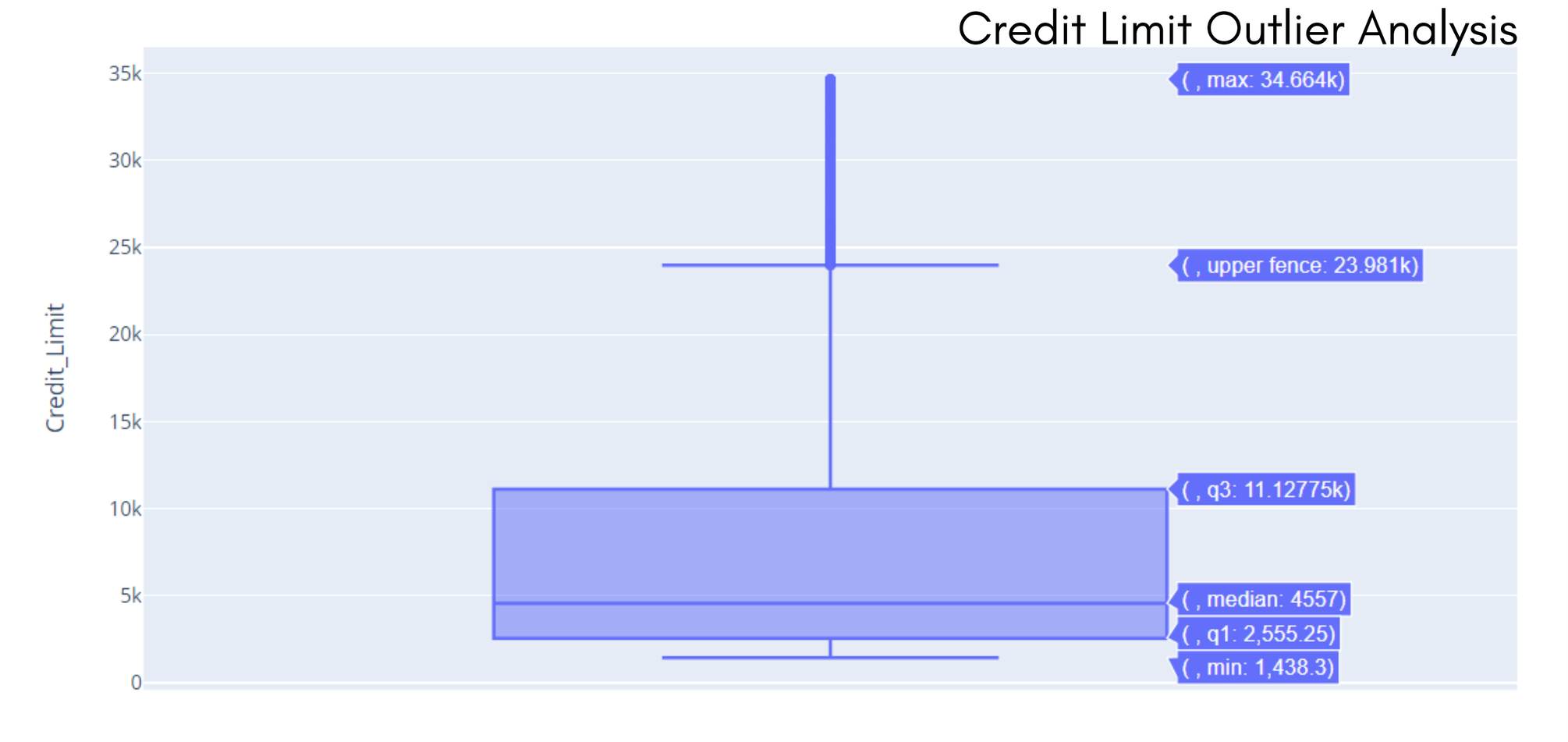


PRE-PROCESSING



mean: 2.7

PRE-PROCESSING



mean: 8,703

ANALYSIS

High Risk of Churn

- Female
- From England
- 40-45 years old
- Graduate degree
- Married
- <40K / year income

Average Communication

- Active: 4
- Attrited: 3

Average Transactions

- Active: 69
- Attrited: 45

Recommendations

CUSTOMER FEEDBACK

Satisfaction surveys for existing and attrited customers.

CUSTOMER COMMUNICATION

Targeted communication and incentives.

LOYALTY PROGRAMS

Incentivize card usage and long term customer loyalty.

COMPETITIVE ANALYSIS

Stay informed about competitors' offerings.

Opportunities for Improvement

Python

- Actors
- Ratings
- Dataset accuracy
- Movies by decade

Tableau

- Why customers left
- Dataset accuracy
- Bank history
- Background information

Q&A

Thank you!