Elevating Passenger Experience Through In-Flight Connectivity Insights

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Role Applying For: Customer Experience Analyst

Agenda

Objective: Use realistic customer behavior data to uncover insights that can improve WiFi performance and passenger satisfaction

- Tools & Methods
- Key Insights
- Complaint & Channel Behavior
- Forecast: Reducing Dropouts
- Recommendations
- Conclusion & Q&A

Tools & Methods

Excel
Cleaned and analyzed raw data, created pivot tables

Tableau
Created interactive dashboards

Python
Used for quick aggregation and correlation analysis

SQL (BigQuery)
Used to segment trends and calculate key metrics

ChatGPT- Data Set
150 simulated passengers using Viasat powered in-flight WiFi

Fields

- Passenger_ID
- Flight_Date
- Seat_Class
- Flight_Delay_Min
- Checkin_Time_Min
- WiFi_Rating
- Streaming_Experience_Rating
- Satisfaction_Score
- Loyalty_Status
- Booking_ Channel
- Complaint_Ticket
- Avg_Devices_Connected
- WiFi_Dropouts
- Content_Streaming
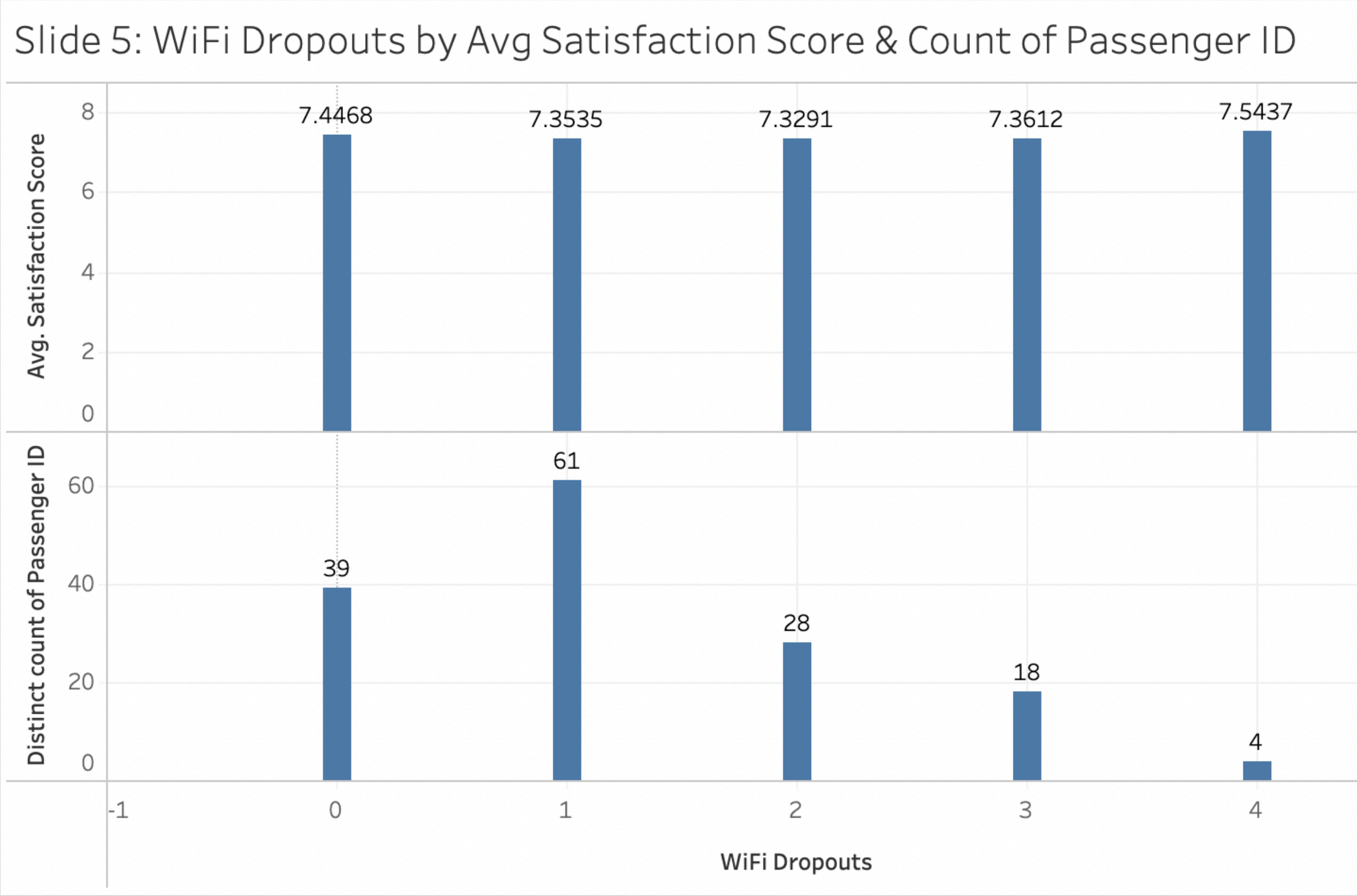- VPN_Use

WiFi Dropouts vs Satisfaction

Row	WiFi_Dropouts	Avg_Satisfaction
1	0	7.45
2	1	7.35
3	2	7.33
4	3	7.36
5	4	7.54

SQL

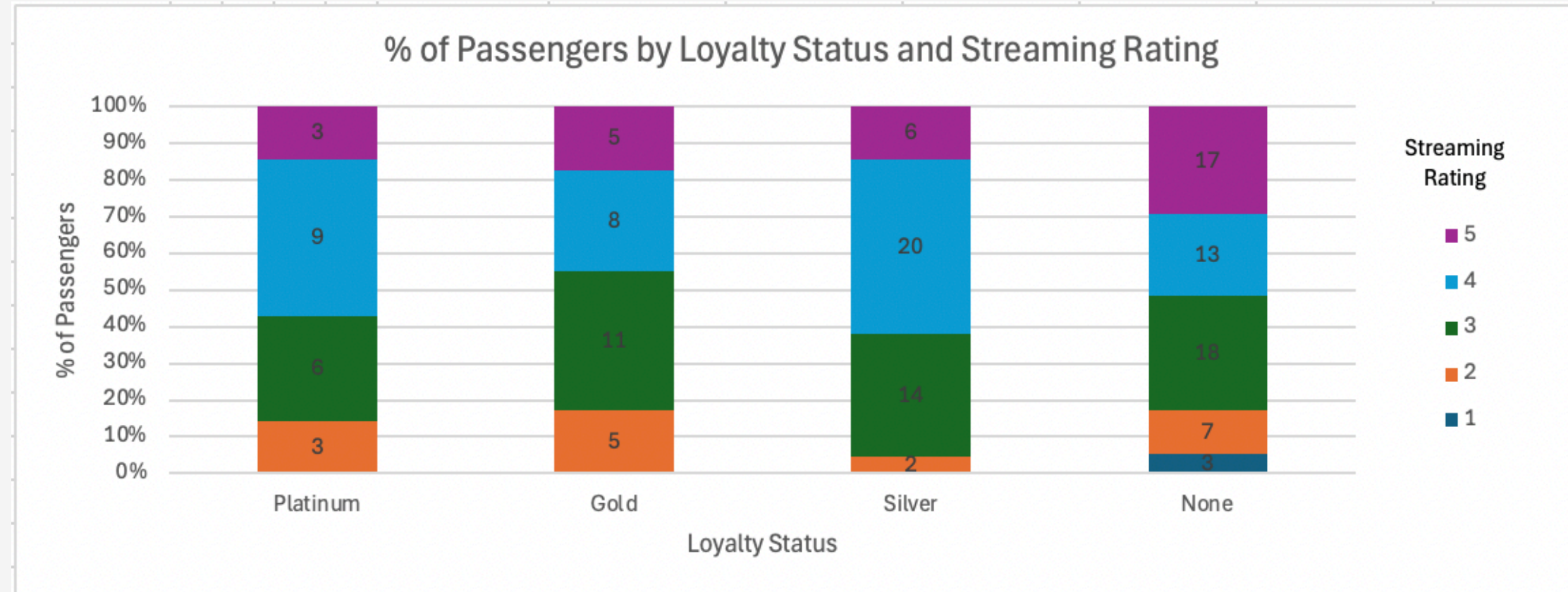**Average Satisfaction Score by WiFi Dropouts Count**
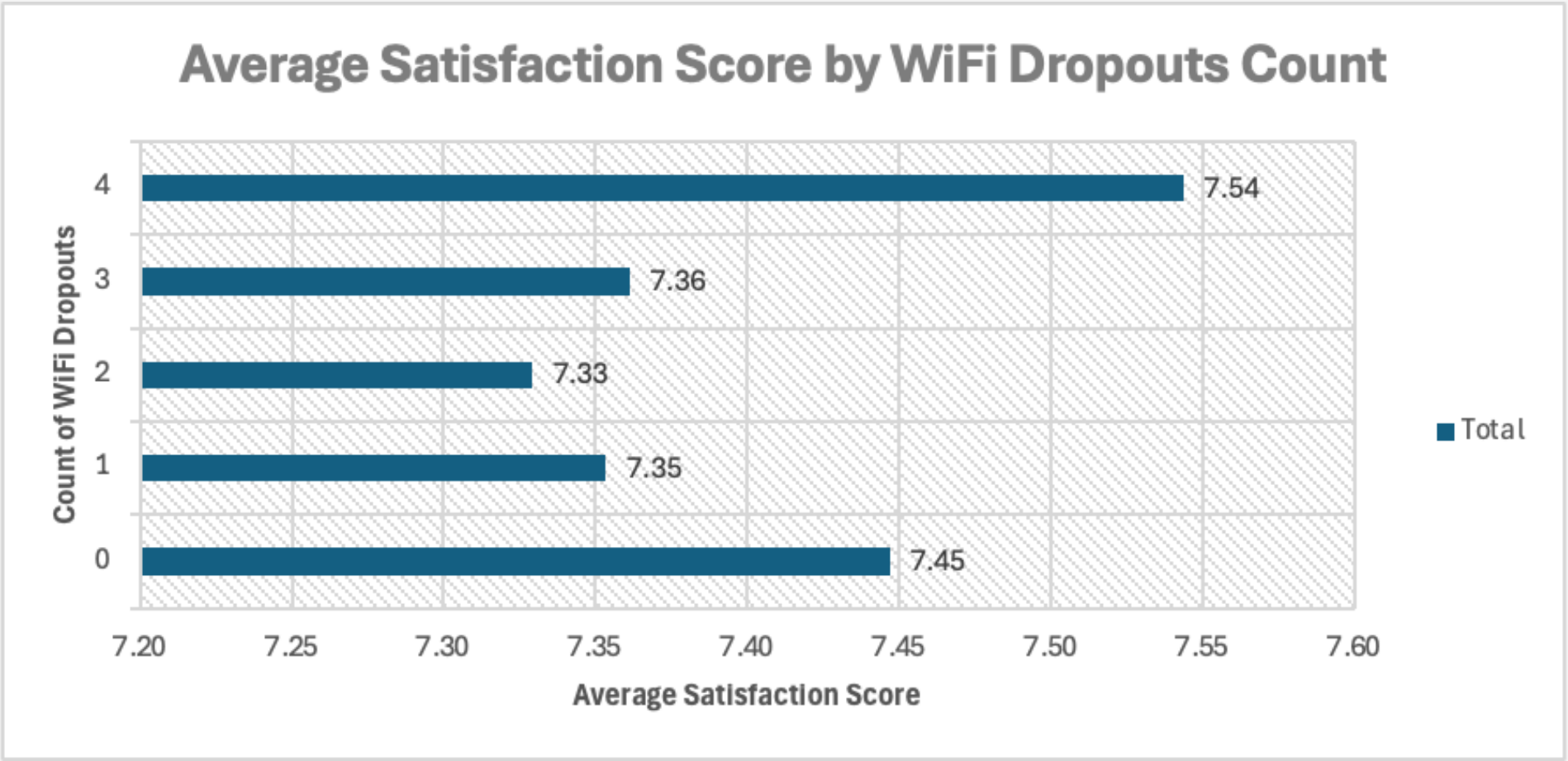
Excel

WiFi Dropouts vs Satisfaction Cont

Loyalty Segment Expectations

Excel
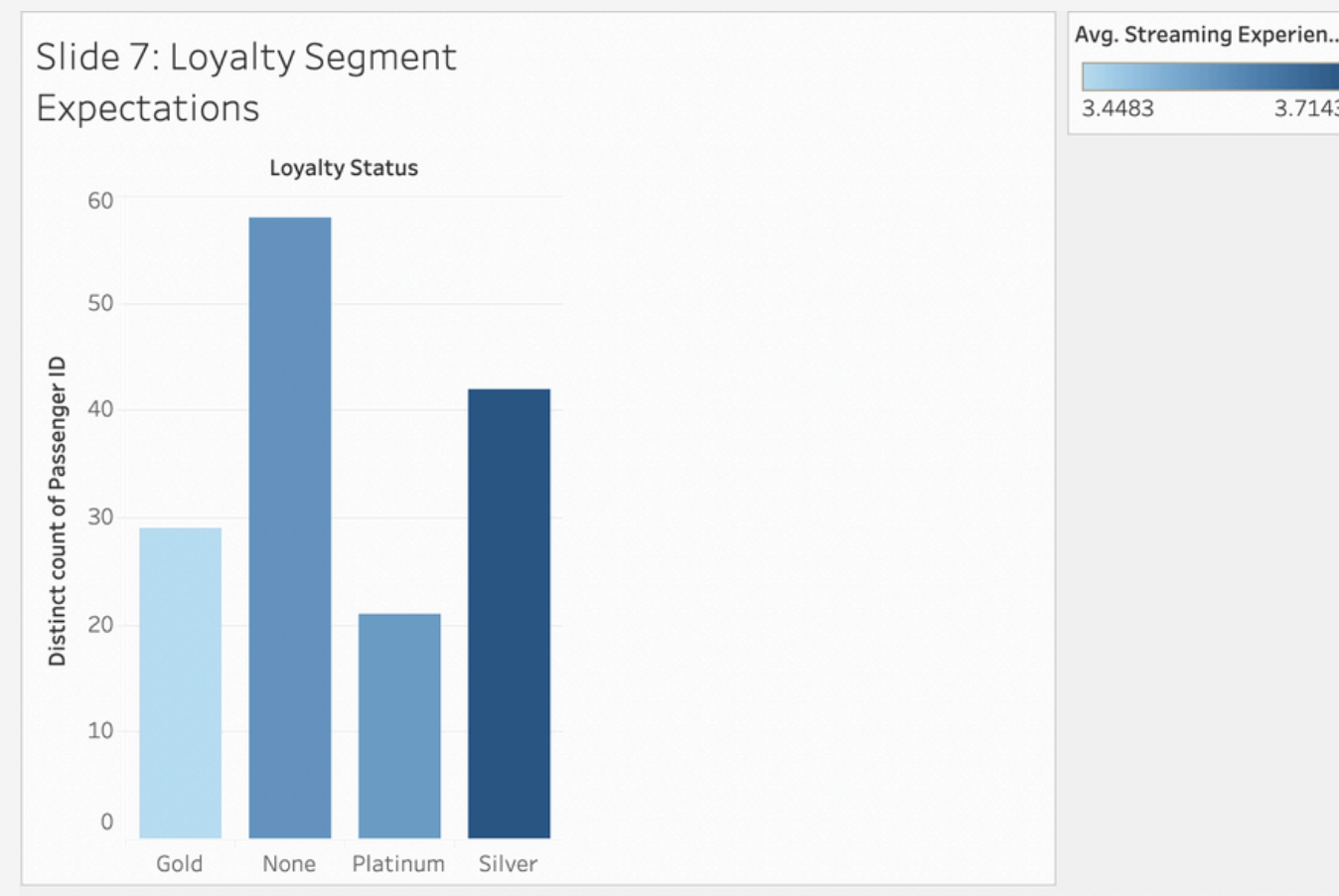
Tableau

VPN Usage Impact

VPN Usage by Experience Rating and Satisfaction

- Average of Streaming_Experience_Rating
- Average of Satisfaction_Score

No: 3.643478261, 7.334787027
Yes: 3.428571429, 7.525004483

VPN Use
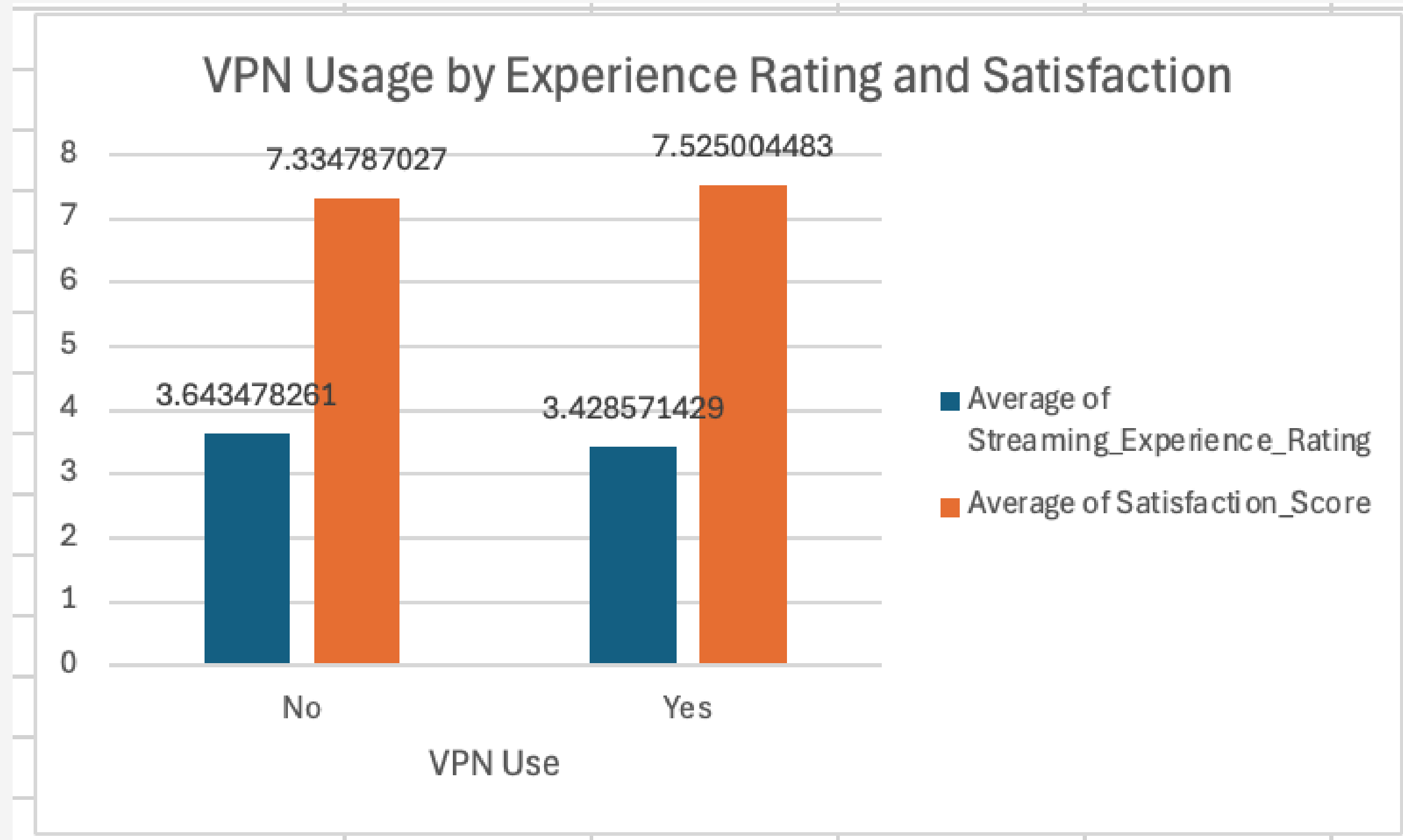
Excel

Complaint Rate by Booking Channel

Row	Booking_Channel	Complaint_Rate_Pct
1	Mobile App	30.0
2	Phone	16.67
3	Travel Agent	14.71
4	Website	14.71

SQL

Complaint Rate by Booking Channel

Mobile App	30.0%
Phone	16.7%
Travel Agent	14.7%
Website	14.7%
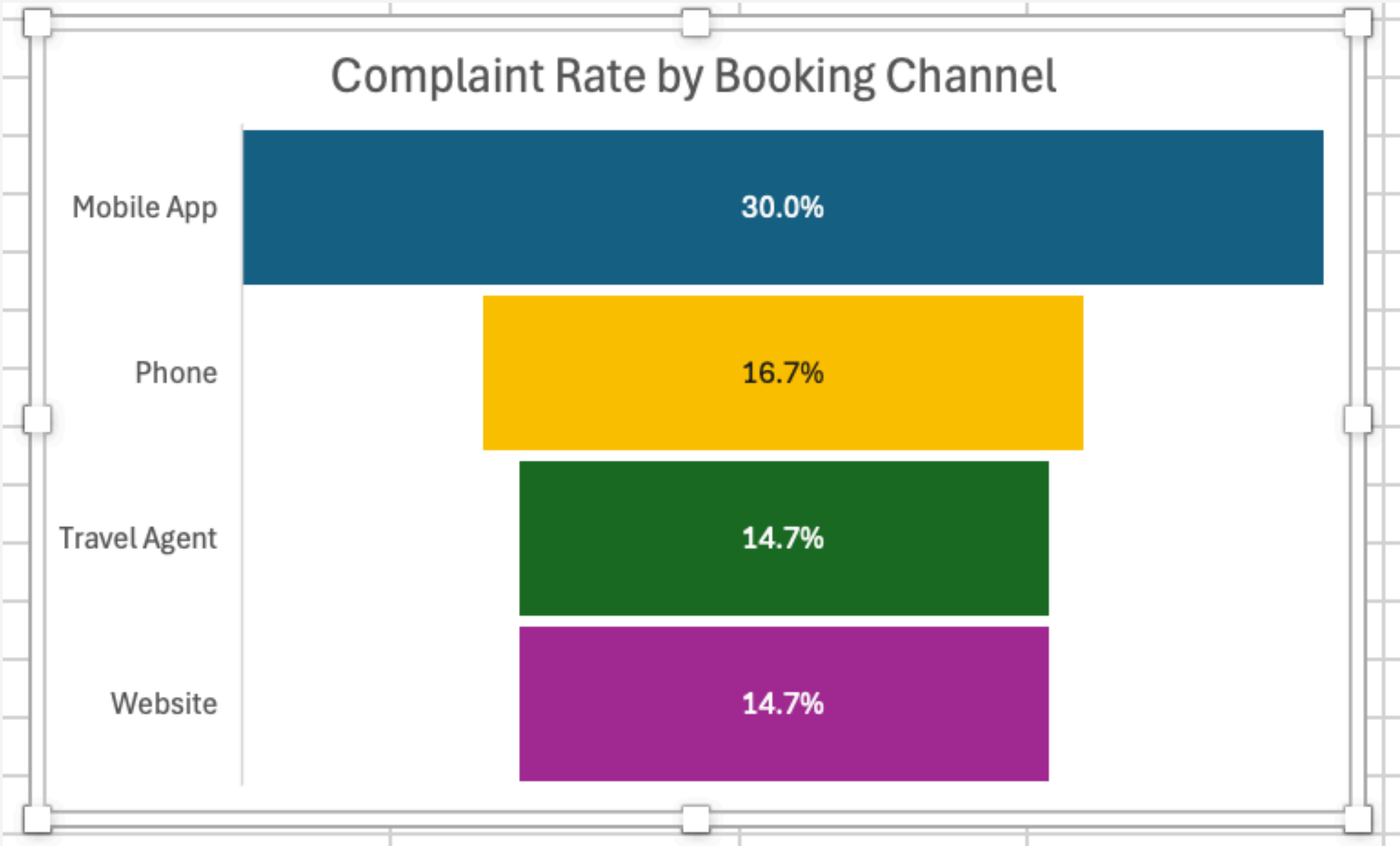
Excel

Forecasting Dropout Reduction

Python

Tableau

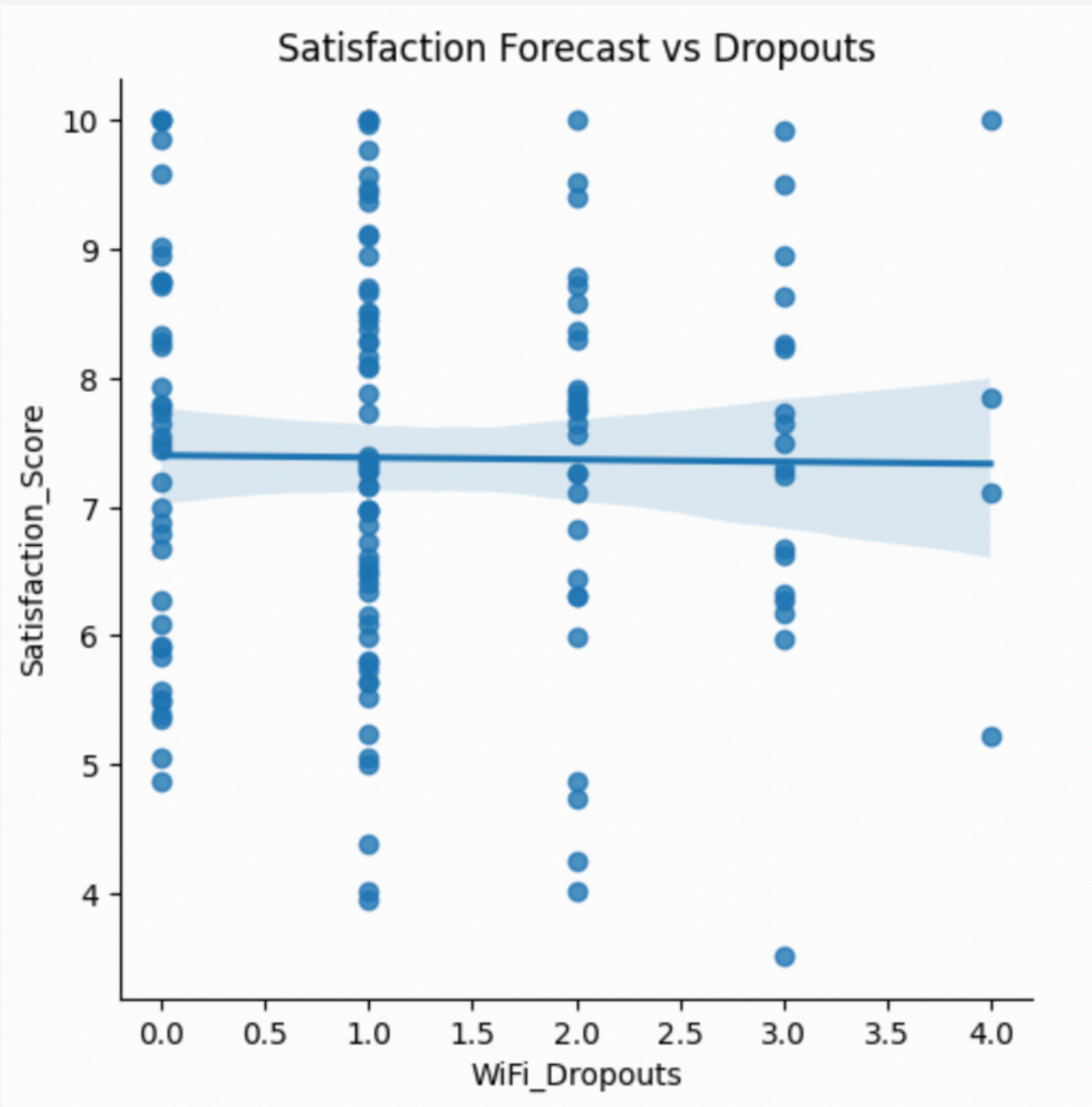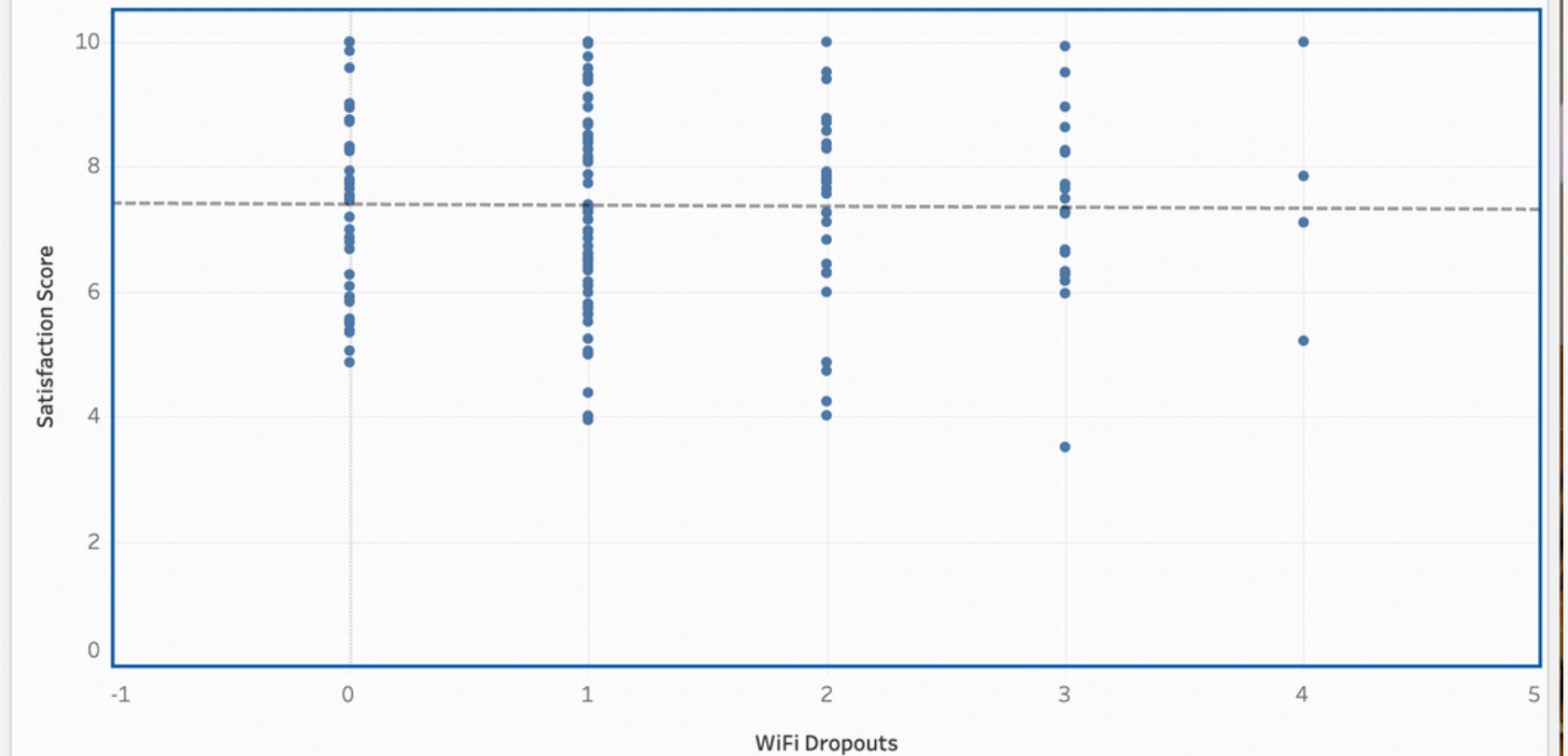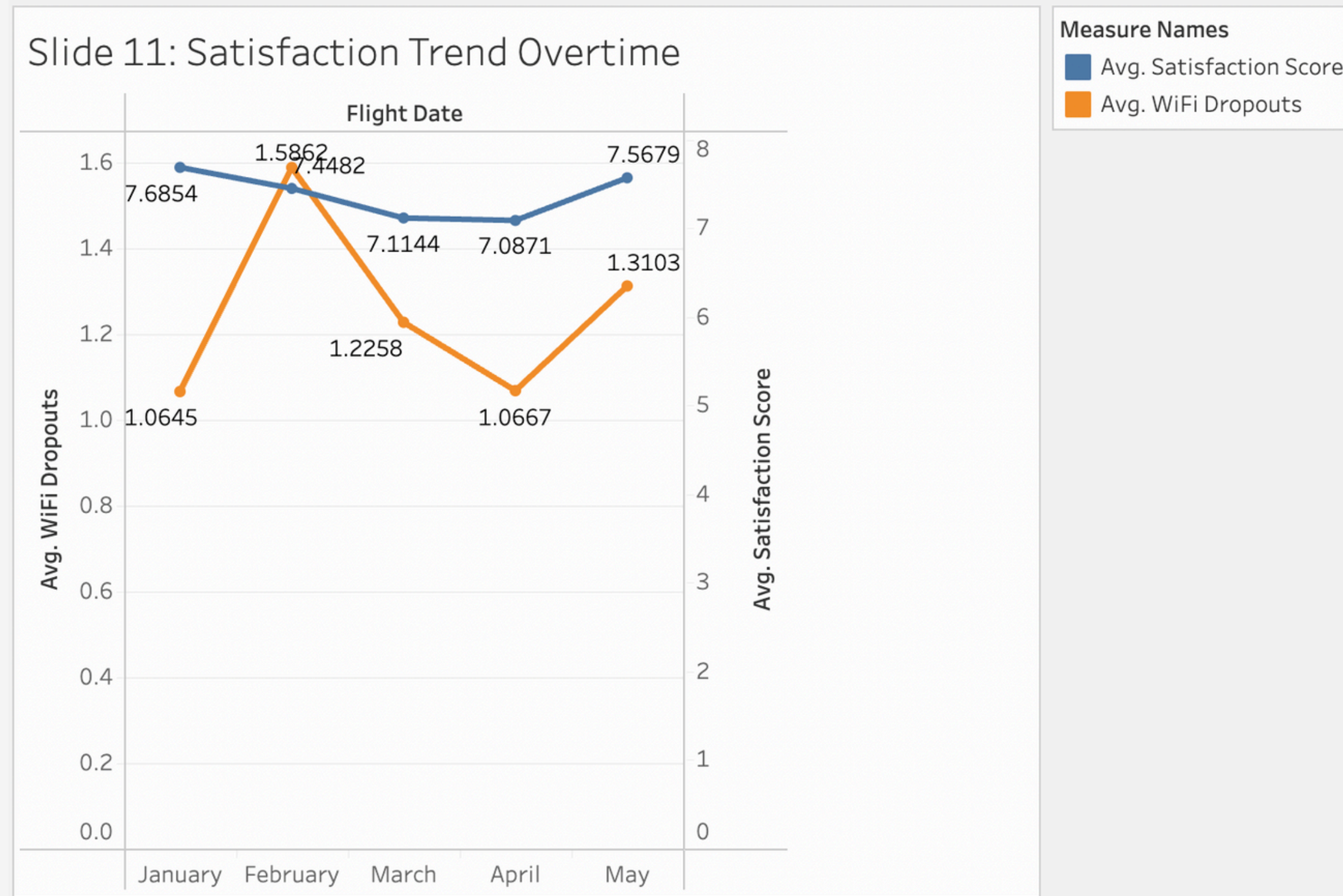Satisfaction Forecast vs Dropouts

Slide 10: Forecasting Dropout Reduction

P-value: 0.891174

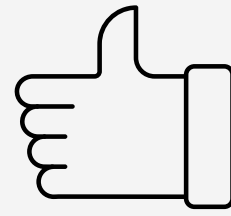Equation: Avg. Satisfaction Score = -0.0163581*WiFi Dropouts + 7.39956

Coefficients

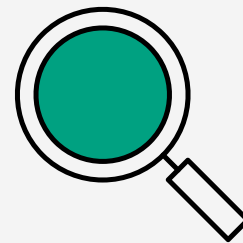| Term	Value	StdErr	t-value	p-value
WiFi Dropouts	-0.0163581	0.119355	-0.137054	0.891174
intercept	7.39956	0.194662	38.0124	< 0.0001

Satisfaction Trend Overtime

Tableau

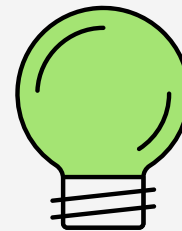# Recommendations: Aligning Experience with Expectations

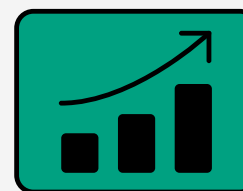**Address Satisfaction Decline Among Loyalty Members**

Help Users Understand VPN Usage Has minimal effect on WiFi Experience

Investigate Mobile App Complaint Rate

Continue Reducing WiFi Dropouts to Protect Satisfaction

Analyze Drop in Satisfaction for March for Root Causes

What Was Learned

- Dropouts directly impact satisfaction
- Loyalty members are less forgiving
- Complaint behavior varies by channel
- Satisfaction trends over time reveal seasonal gaps

What It Means

- Improving the in-flight WiFi experience requires more than technical performance
- By combining dropout data, booking behavior and passenger segmentation we can deliver targeted enhancements that increase satisfaction without unnecessary overengineering