Churn Analysis 2022-23

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Brandwatch Worldwide Agency Team

About the data

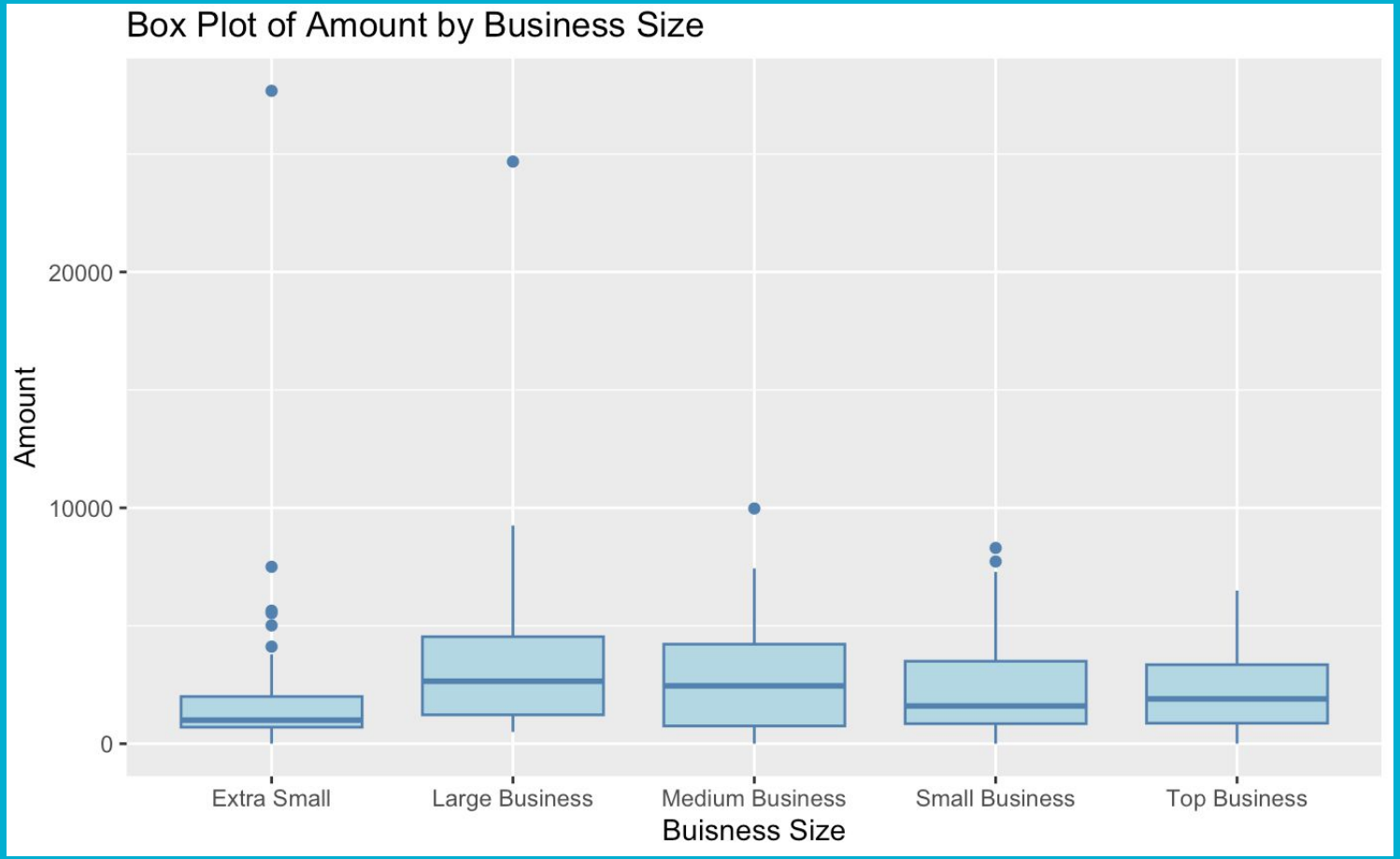
- This data set showcases the churn data for 2022 and the first two fiscal quarters of 2023 for Brandwatch worldwide Agency team. We will attempt to showcase patterns in the churn for these regions and draw conclusions that will help us determine how to decrease churn for upcoming quarters
- We will be monitoring how different variables affect the churned amount in $$ USD

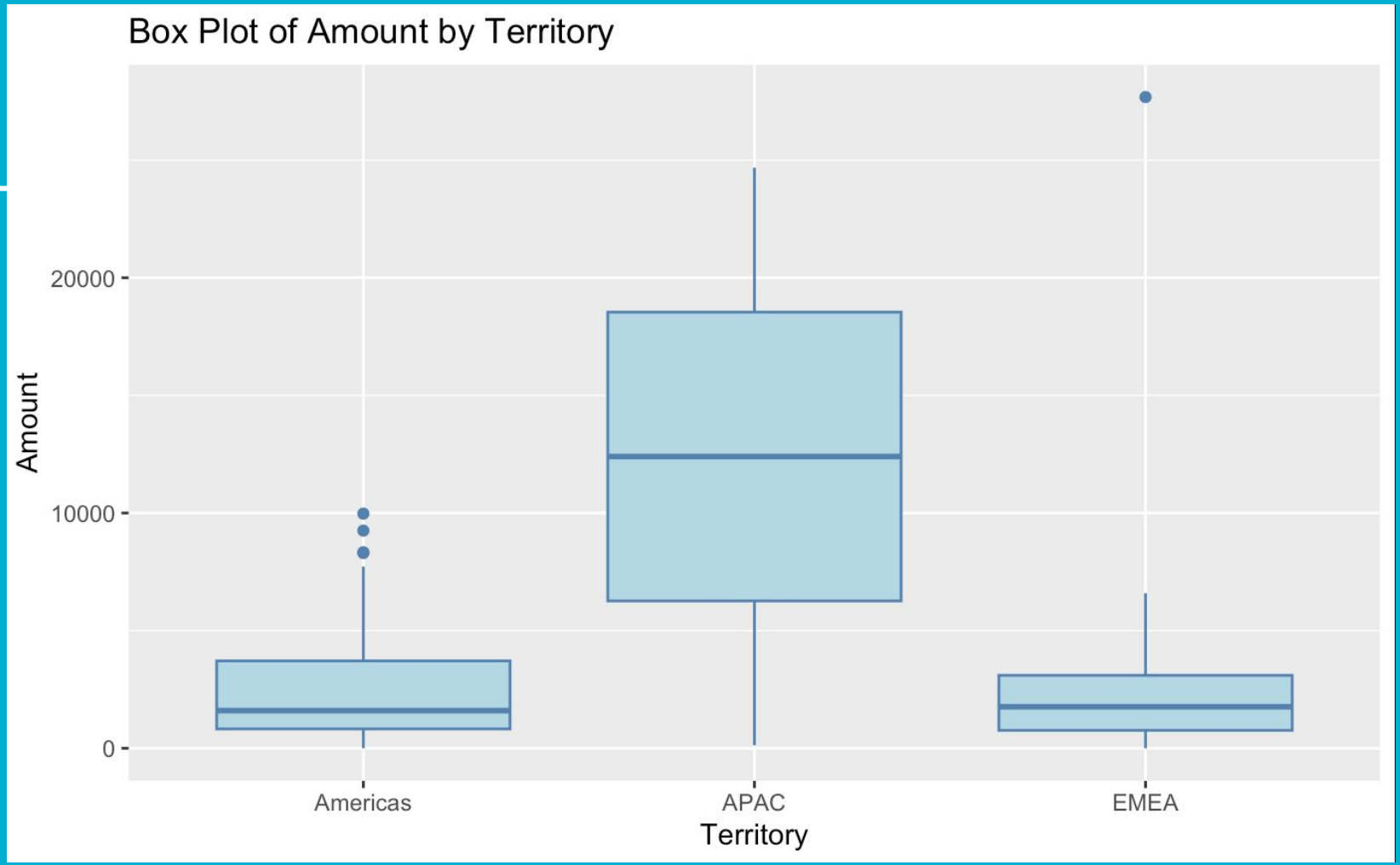
Findings

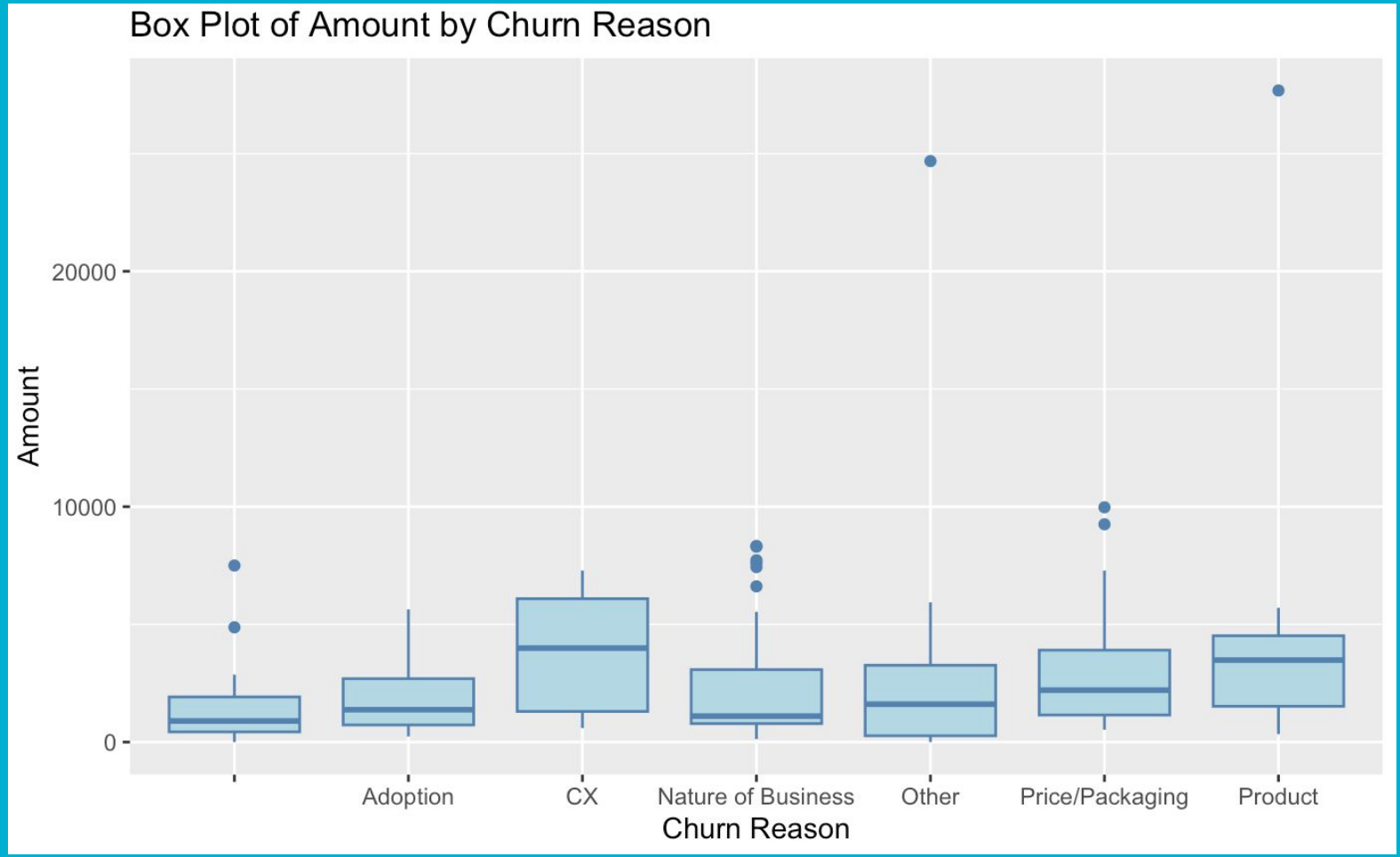
- Top Businesses have the highest Churned amount
- APAC has highest churned amount out of the territories
- Product and Customer Experience has the highest impact for churn reason
- Hong kong, France, Spain, and The US have the highest out of Billing country
- Havas and WPP have the highest Churned amount for Agency Group
- BCR and Brandwatch Pro Research Packages have the biggest impact
- And theres is no Significant Pattern on Churn Rate throughout the Quarters

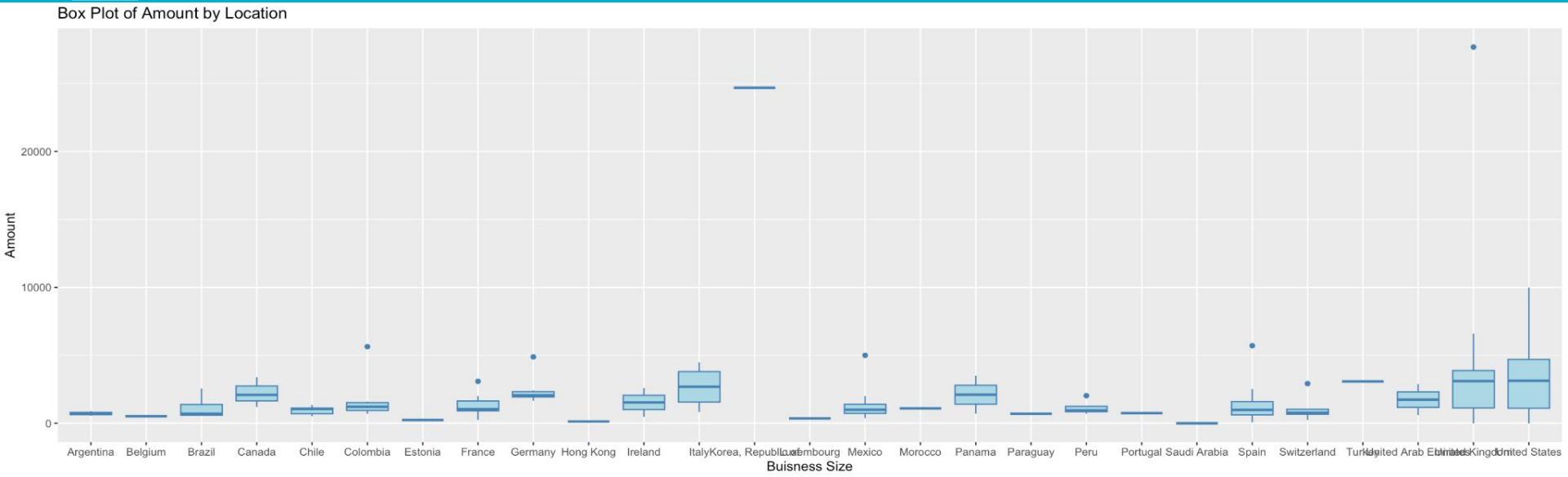
Combining Data Points & How to read a Box Plot

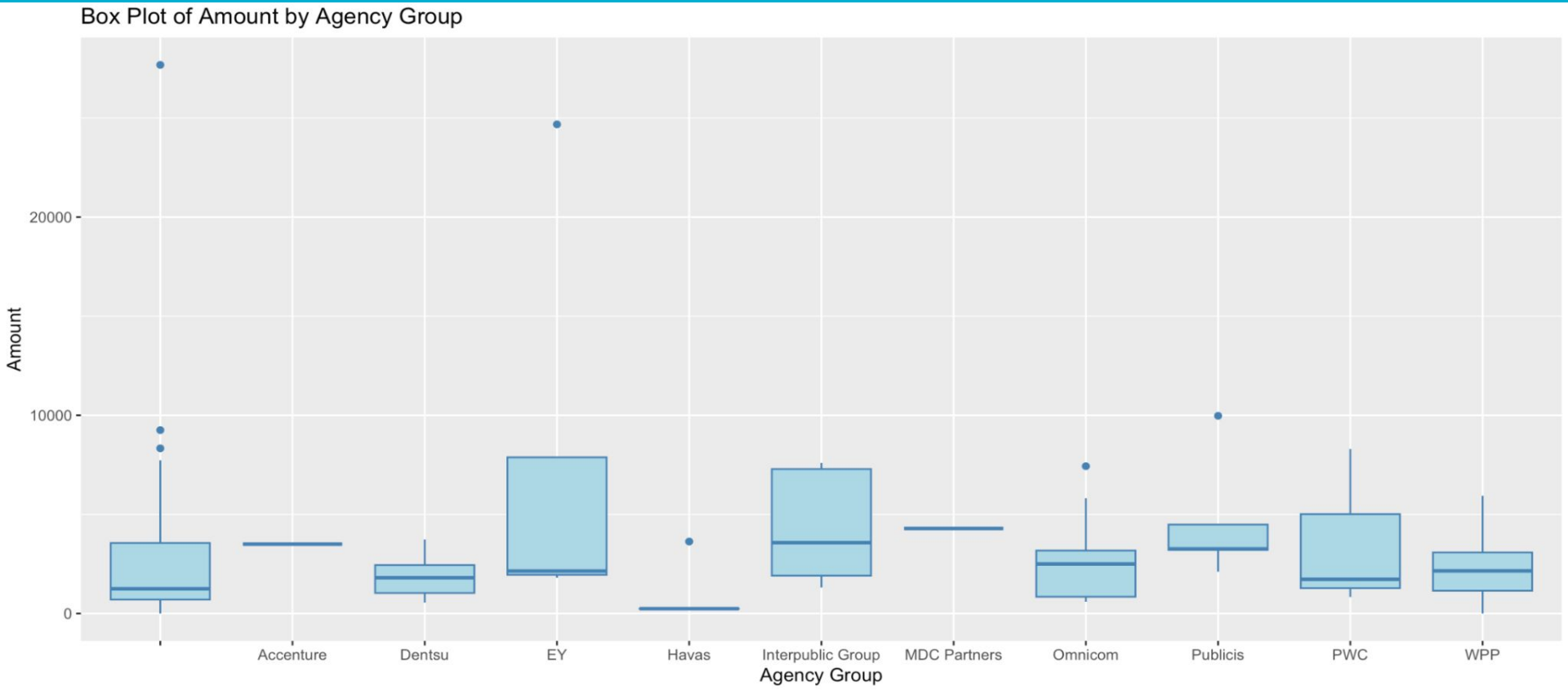
- Combining the Data points that are in Business Size
- Combining the Data in the Brandwatch products used (suits)
- Box plots use a basic format as you will see in the next slide
- The line through the center is the median amount churned by said variable
- 1st and 3rd quartiles are the edges of the box and the min and max are the ends of the lines
- The dots are outliers


Box Plot of Amount by Business Size
Amount
20000
10000
0
Extra Small
Large Business
Medium Business
Small Business
Top Business
Buisness Size


Box Plot of Amount by Territory
Amount
20000
10000
0
Americas
APAC
EMEA
Territory


Box Plot of Amount by Churn Reason
Amount
20000
10000
0
Adoption
CX
Nature of Business
Other
Price/Packaging
Product
Churn Reason


Box Plot of Amount by Location
Amount
20000
10000
0
Argentina
Belgium
Brazil
Canada
Chile
Colombia
Estonia
France
Germany
Hong Kong
Ireland
Italy
Korea, Republic of
Luxembourg
Mexico
Morocco
Panama
Paraguay
Peru
Portugal
Saudi Arabia
Spain
Switzerland
Turkey
United Arab Emirates
United Kingdom
United States
Buisness Size


Box Plot of Amount by Agency Group
Amount
20000
10000
0
Accenture
Dentsu
EY
Havas
Interpublic Group
MDC Partners
Omnicom
Publicis
PWC
WPP
Agency Group

Normality

We can tell from the box plots and the Shapiro-Wilks Test that the data is objectively normal . We can also use the box plots to start giving us information about the breakdowns of the specific variables and can now do a multiple linear regression analysis.

```
        Shapiro-Wilk normality test

data:  ChurnAmount
W = 0.62038, p-value < 2.2e-16
```

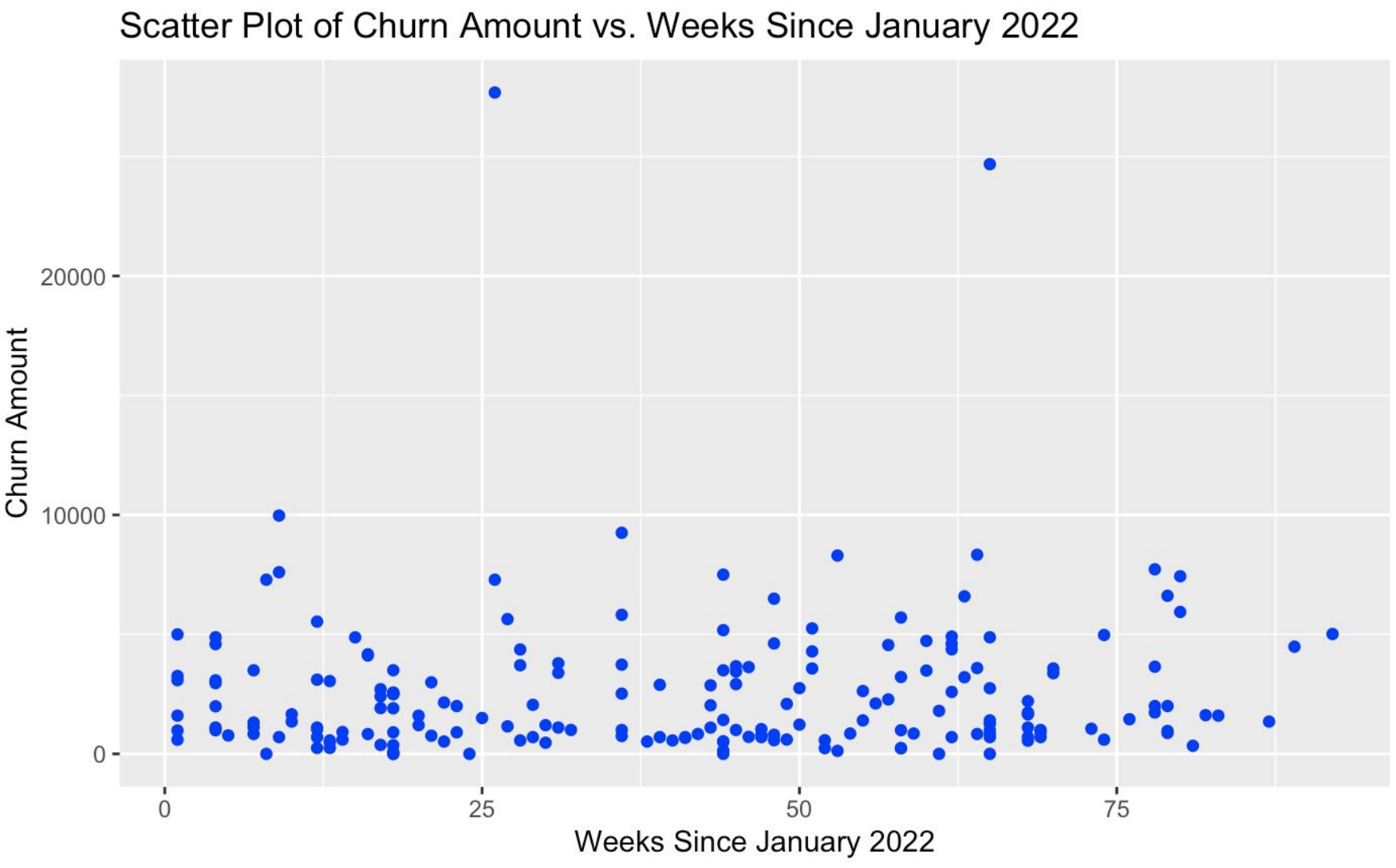
	Estimate	Std. Error	t value	Pr(>|t|)	
(Intercept)	-93.35	1801.59	-0.052	0.95874	
TerritoryAPAC	25470.28	3171.37	8.031	2.03e-13	***
TerritoryEMEA	3445.41	1634.54	2.108	0.03661	*
ScreeningLarge Business	-541.62	680.93	-0.795	0.42756	
ScreeningMedium Business	-737.23	610.00	-1.209	0.22862	
ScreeningSmall Business	-261.64	696.69	-0.376	0.70775	
ScreeningTop Business	-1168.79	706.19	-1.655	0.09988	.
Churn.ReasonAdoption	528.81	1104.65	0.479	0.63280	
Churn.ReasonCX	2270.74	1402.35	1.619	0.10738	
Churn.ReasonNature of Business	746.45	917.02	0.814	0.41686	
Churn.ReasonOther	-155.31	1005.76	-0.154	0.87747	
Churn.ReasonPrice/Packaging	1584.02	958.92	1.652	0.10053	
Churn.ReasonProduct	3215.01	1144.13	2.810	0.00558	**
Billing.CountryBelgium	-2098.49	2832.50	-0.741	0.45987	
Billing.CountryBrazil	725.93	1758.78	0.413	0.68035	
Billing.CountryCanada	632.28	2217.55	0.285	0.77592	
Billing.CountryChile	717.75	1969.72	0.364	0.71605	
Billing.CountryColombia	935.49	1926.37	0.486	0.62790	
Billing.CountryEstonia	-2906.98	2778.75	-1.046	0.29708	
Billing.CountryFrance	-2754.16	1216.25	-2.264	0.02490	*
Billing.CountryGermany	-1494.06	1228.41	-1.216	0.22569	
Billing.CountryHong Kong	-25998.38	3868.33	-6.721	3.06e-10	***
Billing.CountryIreland	-2947.41	2005.11	-1.470	0.14355	
Billing.CountryItaly	-887.84	1477.29	-0.601	0.54870	
Billing.CountryKorea, Republic of	NA	NA	NA	NA	
Billing.CountryLuxembourg	-2097.28	2738.56	-0.766	0.44491	
Billing.CountryMexico	604.57	1699.67	0.356	0.72254	
Billing.CountryMorocco	-2737.47	2766.77	-0.989	0.32397	
Billing.CountryPanama	381.23	2465.64	0.155	0.87732	
Billing.CountryParaguay	-790.67	3078.45	-0.257	0.79763	
Billing.CountryPeru	657.08	2076.29	0.316	0.75206	
Billing.CountryPortugal	-3090.52	2766.77	-1.117	0.26567	
Billing.CountrySaudi Arabia	-3352.07	2850.20	-1.176	0.24132	
Billing.CountrySpain	-2453.83	1002.42	-2.448	0.01546	*
Billing.CountrySwitzerland	-2142.79	1355.25	-1.581	0.11584	
Billing.CountryTurkey	-758.85	2766.77	-0.274	0.78423	
Billing.CountryUnited Arab Emirates	-1930.49	1979.60	-0.975	0.33095	
Billing.CountryUnited Kingdom	NA	NA	NA	NA	
Billing.CountryUnited States	3162.34	1591.08	1.988	0.04858	*

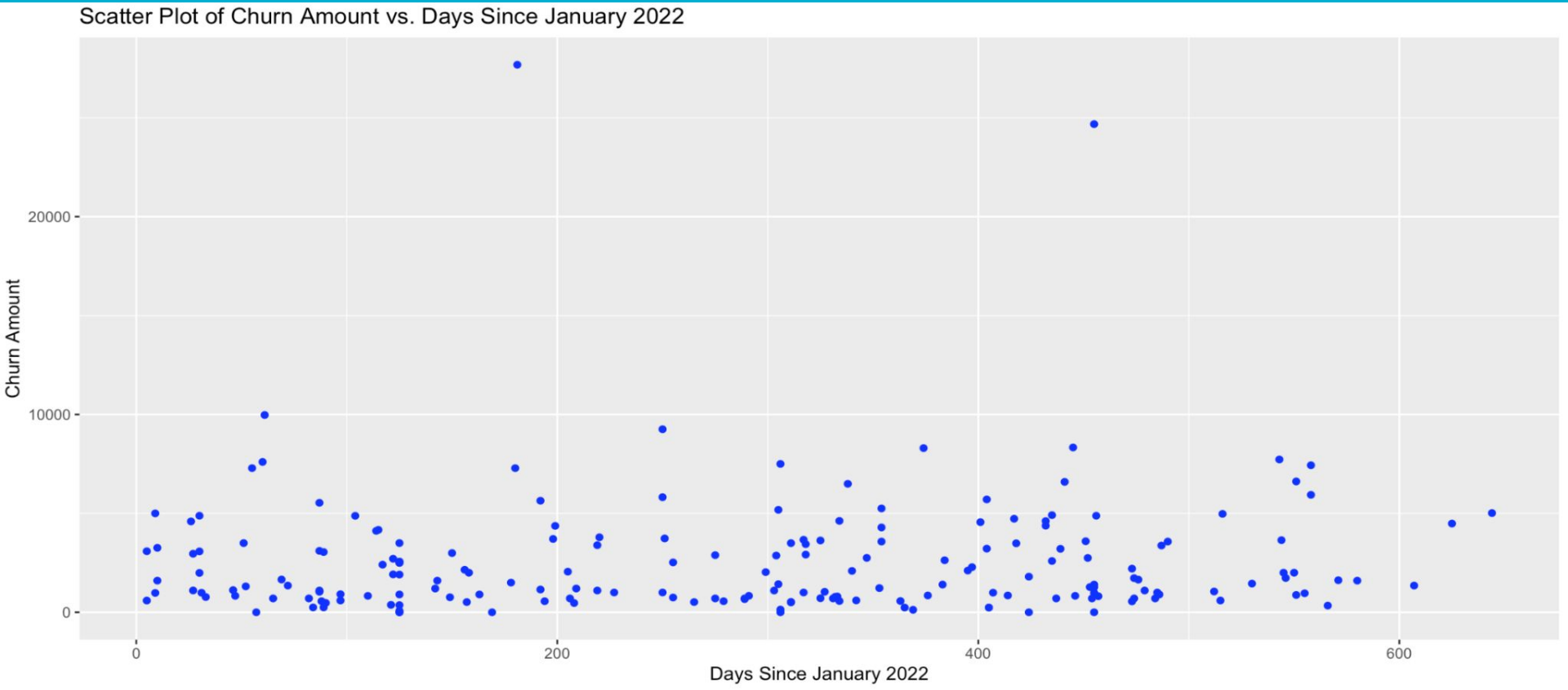
Multiple Linear Regression Report

In reviewing the results of the Regression table i am going to report the most significant findings for effect on The overall churn price. APAC territory has the most significant churn as a whole. But EMEA has a slightly significant p value therefore it should be considered that it had a significant correlation. We can verify this by looking at the box plot and see that APAC has the most churn. The only correlation for type business that was even slightly significant was the label "top businesses" I can only assume that these business have more money in their contracts so it has a higher pull on the churn data . Other than that nothing to report on the business type. For Churn reason "Product" has a highly significant correlation with amount we churned from companies. We can conclude that our customers are deciding that our product isn't sufficient and maybe we need to reevaluate how we present our product and how we support during the renewal process. Hong kong, France, Spain, and The US have the most significant Billing country for location where the churn occurred. With comparing this to the box plot we created it seems like the US and UK have the highest Churn amount even though the UK shows up as NA there is a significant outlier for the UK which might be why its showing up this way.

To show Churn Rate

- To quantify the dates that these accounts churned we have to look at the days and weeks since the first day of the quarter to determine what kind of trends we are seeing
- In the following graph you can see that there is no pattern that is evident meaning churned amount is not decreasing or increasing its staying neutral


Scatter Plot of Churn Amount vs. Weeks Since January 2022
Churn Amount
20000
10000
0
0
25
50
75
Weeks Since January 2022


Scatter Plot of Churn Amount vs. Days Since January 2022
Churn Amount
20000
10000
0
0
200
400
600
Days Since January 2022

Brandwatch Products

I ran an analysis on the brandwatch products and found that the BCR and the Brandwatch Pro Research packages have the highest impact on churned amount

Important to add that the way i determined this the break up might be slightly skewed because i had to combine variables.

Final Thoughts and Conclusions