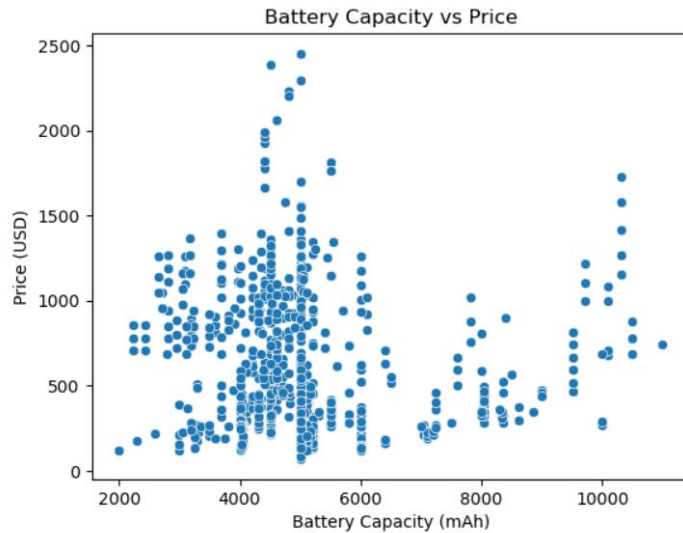


Part 1: Analytical Questions

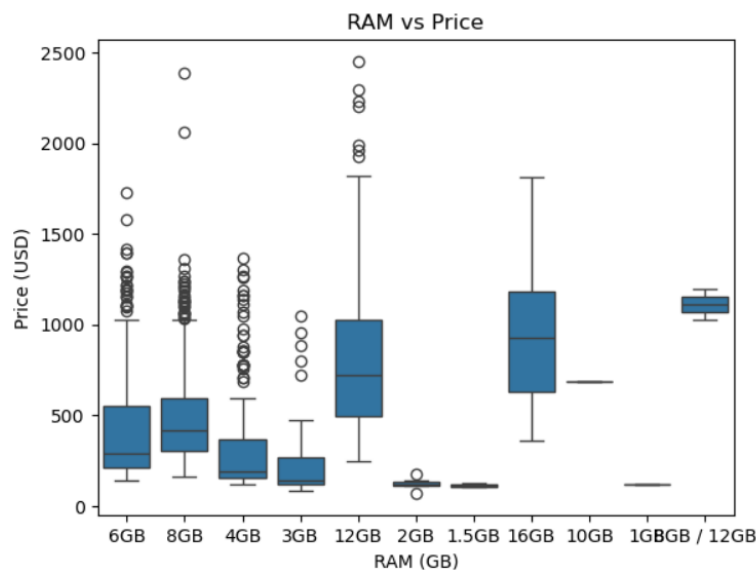
Question 1: *Does battery capacity influence the launched price of a smartphone? Check this variability across all currencies. Is there any type of difference between behaviors?*



Correlation: -0.04

As shown in scatterplot, the correlation between price and battery capacity is weak (-0.04). Battery capacity *does not significantly affect* the smartphone price.

Question 2: *Does RAM size impact the price of smartphones? Check this variability across all currencies. Is there any type of difference between behaviors?*



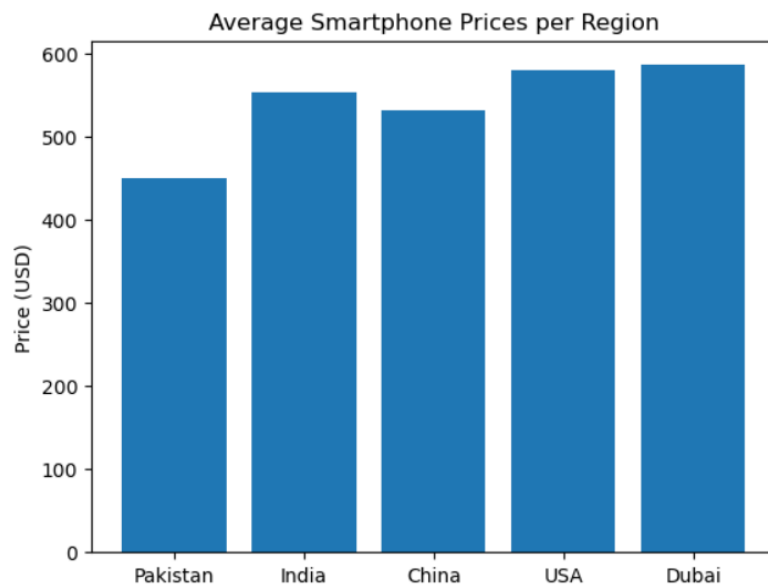
The box plot shows a trend where higher RAM options have higher prices. The ANOVA test yielded a p-value of 0.0000, meaning the RAM size statistically impacts smartphone prices.

Question 3: *Do Apple devices have a higher price variation across different regions compared to other brands? In which country do Apple devices have the highest markup? Are there brands with more stable pricing across regions?*

Apple price variation:

Launched.Price.Pakistan.PKR	77274.850316
Launched.Price.India.INR	29509.851082
Launched.Price.China.CNY	1780.705014
Launched.Price.USA.USD	247.896867
Launched.Price.Dubai.AED	867.027994

Category	Budget	Mid-range	Premium
Company.Name			
Apple	1.0	6.0	90.0
Google	NaN	11.0	10.0
Honor	33.0	35.0	23.0
Huawei	NaN	17.0	25.0
Infinix	43.0	13.0	NaN
Lenovo	10.0	5.0	NaN
Motorola	27.0	29.0	6.0
Nokia	10.0	NaN	NaN
OnePlus	9.0	29.0	15.0
Oppo	41.0	66.0	22.0
POCO	19.0	11.0	NaN
Poco	2.0	NaN	NaN
Realme	44.0	25.0	NaN
Samsung	29.0	14.0	41.0
Sony	NaN	3.0	6.0
Tecno	20.0	10.0	9.0
Vivo	40.0	37.0	9.0
Xiaomi	7.0	10.0	10.0
iQOO	NaN	3.0	NaN



Apple has a significant price variation across regions, with the highest standard deviation in Pakistan and India. USA has the most stable Apple prices. The devices have the highest markup in Pakistan.

Question 4: *Do all smartphone brands have flagship and budget-friendly models, or do some brands only focus on premium devices?*

Apple, for instance, focuses mainly on the Premium spectrum (9 premium, 6 mid, 1 budget). Google like Huawei mostly focus on mid-range spectrum, however Huawei also covers premium spectrum, Honor, Samsung, Oppo, on the other hand presents its devices in all 3 categories. Infinix, Realme, and Tecno are more focused on budget-friendly devices.

Question 5: *Which region offers the most affordable smartphone prices on average? Are there any brands that price their phones significantly lower in one region compared to others?*

Pakistan has the lowest average smartphone prices, followed by China. USA and Dubai have the highest prices for smartphones.