

Panerai Visualization and Model

EDHEC-DAAI-DS-Group 10

Data source connection

The screenshot shows the Tableau interface with the following components:

- Left Panel:** Contains navigation options like '连接' (Connect), '收费项目' (Billing Item), '项目' (Project), '数据集' (Dataset), and '表' (Table). The '连接' section is highlighted with a red box, showing 'BigQuery' and 'sales' as available data sources.
- Top Center:** Displays the current data source as '1edhec_cleaned+ (peneraidata)'.
- Diagram:** A blue box highlights a diagram showing '1_edhec_cleaned' connected to '2_panerai_cleaned' and 'sales.csv'.
- Table:** A table preview is shown with columns: 'Reference Code (Sales....)', 'Brand Id', 'Country', 'Currency (Sales.Csv)', and 'Number O'. The data rows show various reference codes and their corresponding brand IDs and currencies.
- Bottom Panel:** Includes a '性能选项' (Performance Options) section and a '数据源' (Data Source) section.

We use BigQuery data tables as our data source and connect it to Tableau.

- A total of three tables are used:
- **edhec_cleaned** and **sales**, which are extracted from BigQuery’s public dataset using SQL
 - **panerai**, which we scraped ourselves using custom code.

All the table were connected by ‘Reference Code’

Price per limited edition(2025)

Collection (..	Product Sp..	Currency (2 Panerai Cleaned)							
		AED	CHF	CNY	EUR	GBP	HKD	KRW	USD
Luminor	False	20,213	15,926	241,759	17,333	20,496	19,380	20,043	127,135
	True	27,405	28,116	320,294	31,200	26,769	26,127	28,717	80,168
Luminor Due	False	14,754	14,322	157,422	15,394	15,687	14,254	12,827	95,180
Radiomir	False	20,961	21,275	243,465	23,440	20,885	37,087	40,684	107,869
	True	23,807	24,568	279,753	27,250	23,159	22,681	25,142	54,240
Submersible	False	17,365	15,846	201,166	17,088	18,179	16,848	15,191	152,935
	True	52,275	53,726	645,086	59,578	51,051	49,836	54,815	110,973

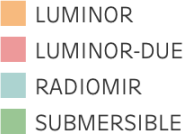
Price Eur (2 Panerai Cleaned)



Currency (2 Panerai Cleaned)



Collection



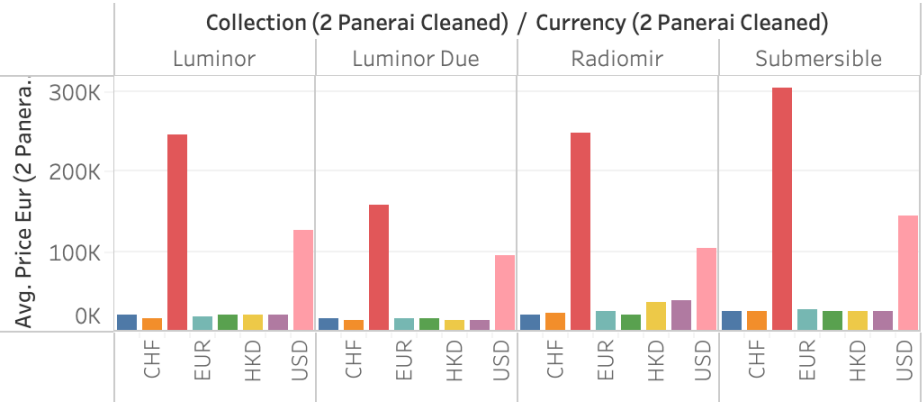
Collection (2 Panerai Cleaned)



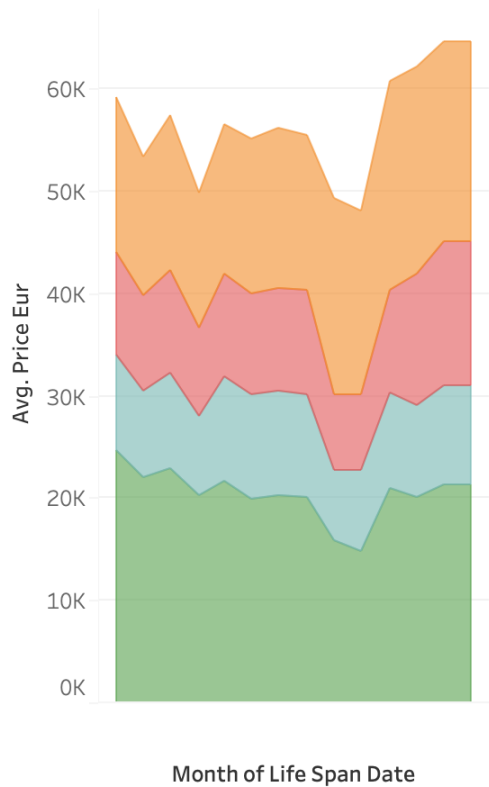
Price per limited edition:

Limited Edition Premium: Across all collections, the price of limited edition ("True" under Product Sp.) watches is consistently higher than non-limited editions ("False"), reflecting the premium associated with exclusivity.

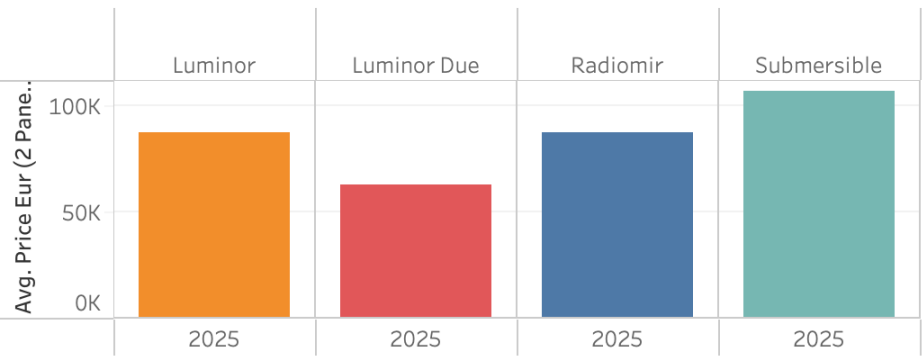
Collection Price per country(2025)



Collection price changes through month (2021-2022)



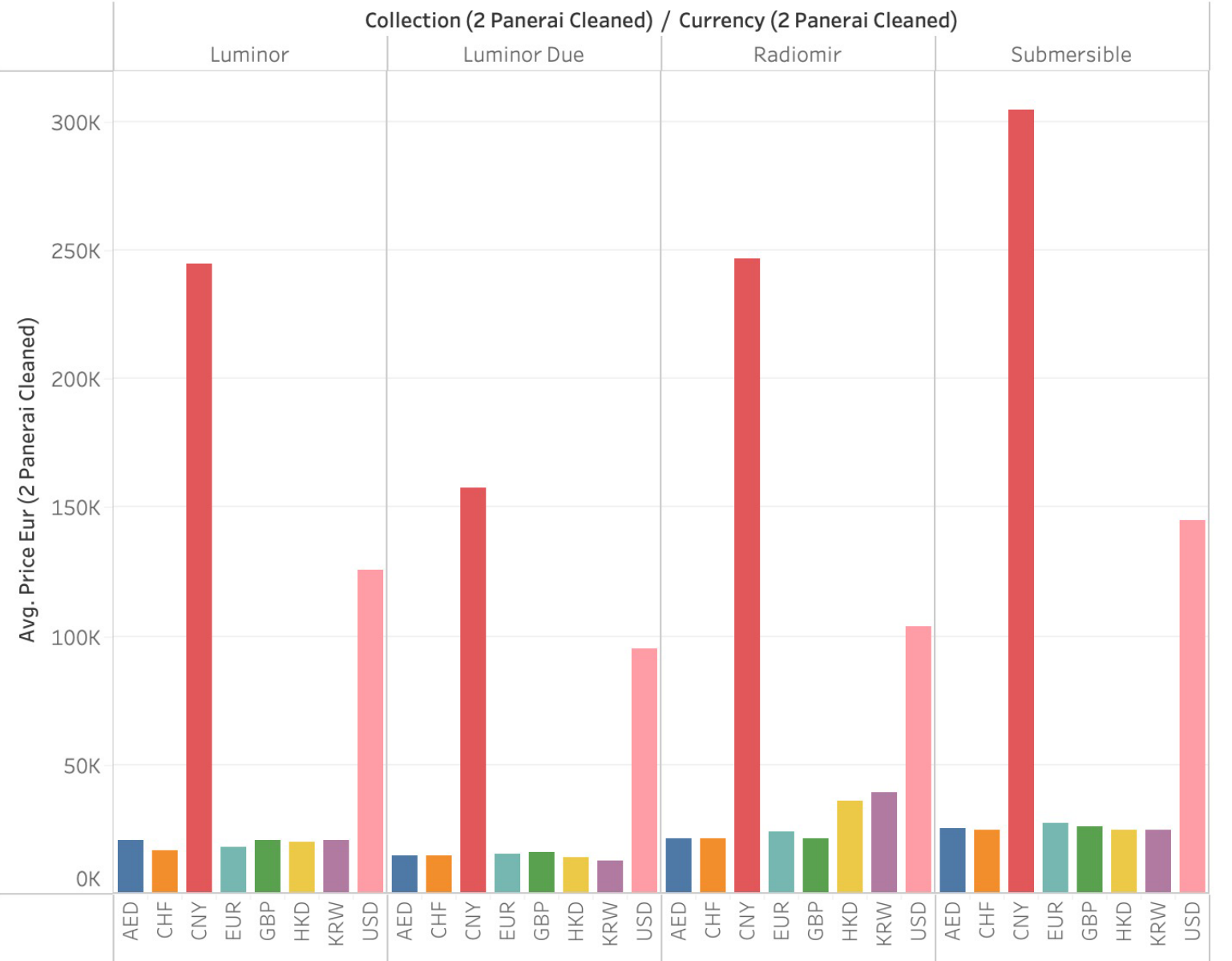
Collection price changes through month (2025.3.17)



Submersible Collection Stands Out: The Submersible collection has the highest price disparity between limited and non-limited editions, especially in CNY (201,166 vs. 645,086) and USD (152,935 vs. 110,973). This suggests that exclusivity in this collection carries a significantly higher premium.

Radiomir vs. Luminor: The Radiomir and Luminor collections maintain similar price patterns, with limited editions showing a moderate price increase compared to standard models. However, Luminor Due has the smallest price gap between limited and non-limited editions, suggesting it may be positioned differently in the market.

Collection Price per country(2025)



Collection Price per country:
The same collection has significant pricing differences in different countries, for example, prices in CNY and USD are significantly higher compared to USD, HKD and other currencies, indicating a strong focus on the European market or higher luxury taxes in these regions.

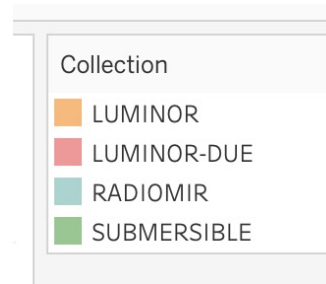
Two collections saw significant price increases: the Submersible and Radiomir collections, likely due to limited edition models, which drive prices higher, reinforcing their exclusivity and high valuation.

Collection price changed through month(2021-2022):

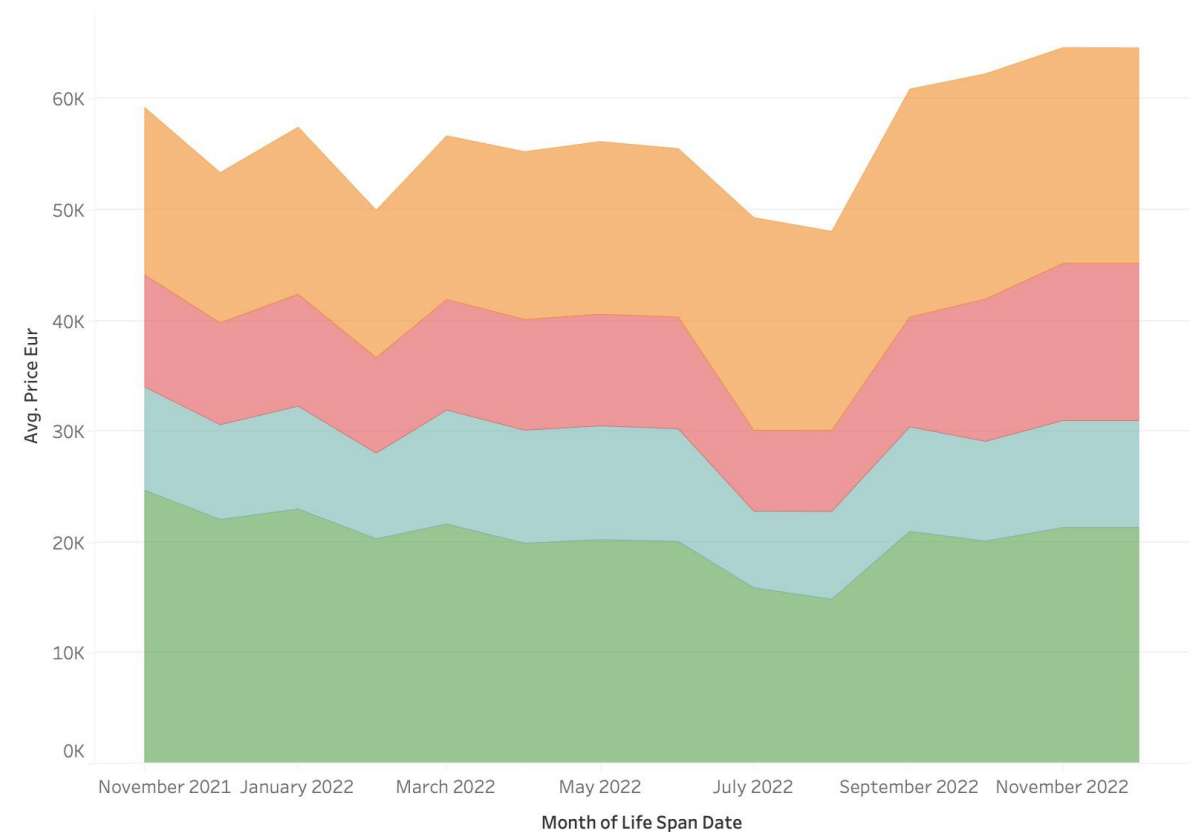
The graph shows the monthly price changes of four Panerai series (Luminor, Luminor Due, Radiomir and Submersible) from 2021 to 2022. Overall, prices show a stable but volatile trend, with occasional declines (especially around July 2022), followed by a steady rise at the end of 2022.

Market recovery at the end of 2022: Prices rebounded sharply after mid-year fluctuations.

- Guessed reason 3: the economy has recovered after the end of the epidemic, and everyone's spending power has increased, so the price of luxury goods has risen.
- Guessed reason 2: Due to the impact of the epidemic, the cost of each link in the production, sales and promotion of luxury goods has increased, resulting in an increase in the price of luxury goods.
- Guessed reason 3: Competitor trend, stronger and higher-priced competitors have emerged, and the brand positioning needs to be unified.



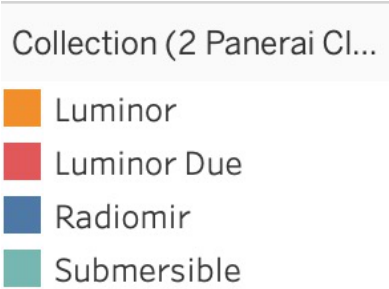
Collection price changes through month (2021-2022)



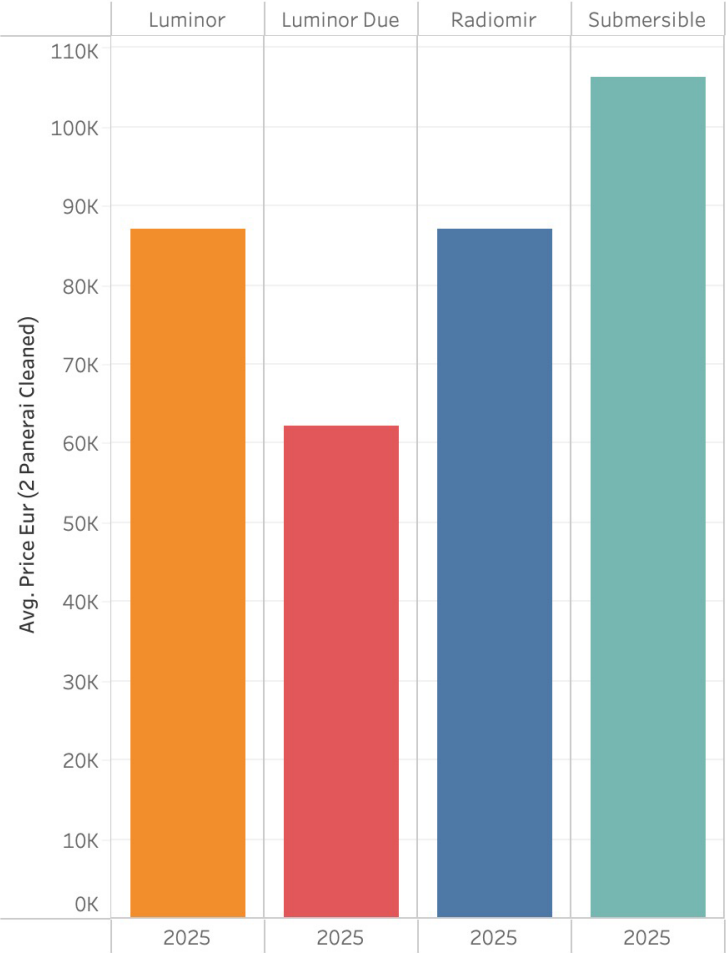
Collection Price changed in 2025.3.17 :

The right graph focuses on the average price forecast for 2025, comparing different series. Submersible has become the most expensive series, exceeding 100,000 euros, indicating that it continues to maintain a high-end positioning.

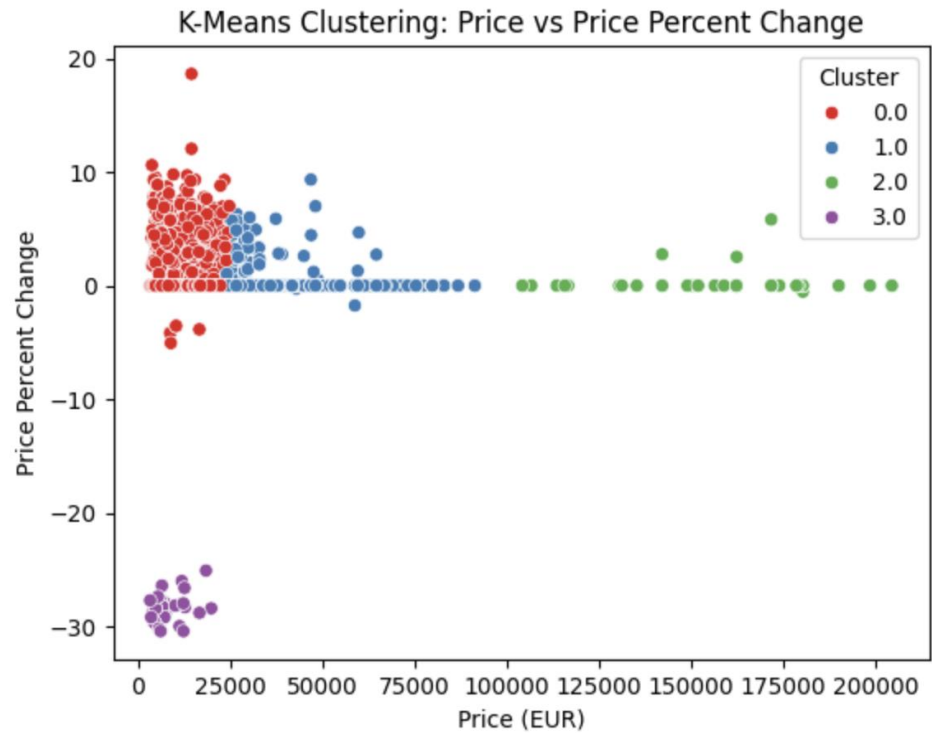
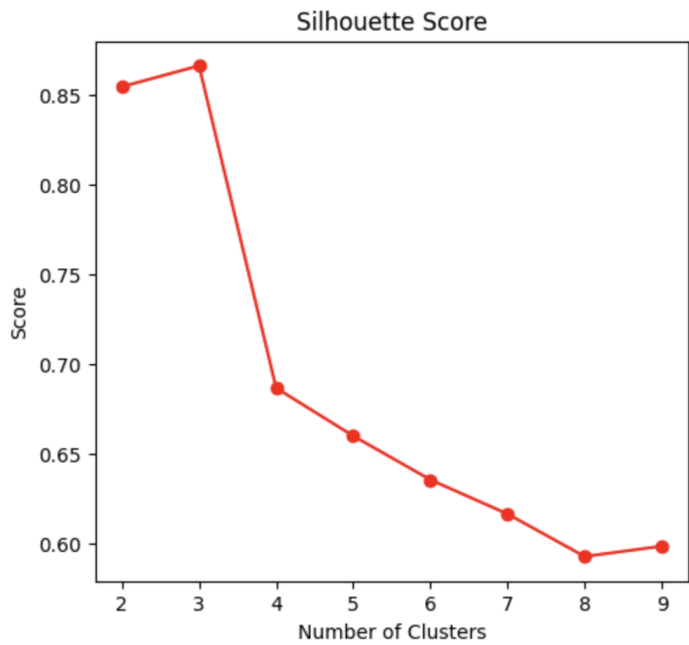
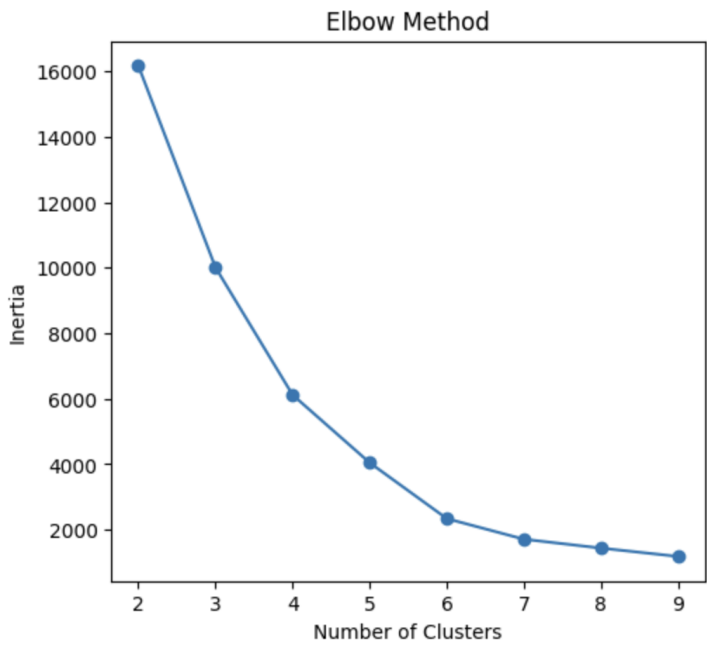
Luminor and Radiomir are at similar price levels, both hovering around 85,000 euros. Luminor Due remains the most affordable, staying below 65,000 euros, consolidating its position as an entry-level luxury line. Submersible remains the high-end luxury line, while Luminor Due remains the most accessible.



Collection Price changed in 2025.3.17:



Interpretation for the Model Output:



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[12]:

	price_eur	price_before_eur	price_percent_change
Cluster			
0.0	10353.802206	10309.381686	0.473227
1.0	37483.911834	37412.016974	0.226245
2.0	156088.374971	155757.421260	0.214694
3.0	7635.122934	10633.218599	-28.303654

Model:

K-means Clustering: We want to discover different watch pricing strategies or market segments.

Interpretation:

Cluster 0: price_eur: 10,353.80 EUR, price_before_eur: 10,309.38 EUR, price_percent_change: 0.47%

This cluster consists of watches with moderately high prices, and the price increase is modest at 0.47%. These watches may represent a mid-range category with a small increase in price, indicating relatively stable market conditions or incremental adjustments.

Cluster 1:price_eur: 37,483.91 EUR, price_before_eur: 37,412.02 EUR, price_percent_change: 0.23%

Watches in this cluster have high prices (around 37,483.91 EUR), but the price change is very small (0.23%). These products likely belong to the higher-end or premium market, with stable pricing and little fluctuation over time.

Cluster 2: price_eur: 156,088.37 EUR, price_before_eur: 155,757.42 EUR, price_percent_change: 0.21%

This cluster represents extremely high-priced watches with a minimal price increase of just 0.21%. These are likely ultra-luxury items with very stable prices. The minimal change in price reflects high market stability and exclusivity, where prices don't fluctuate much over time.

Cluster 3: price_eur: 7,635.12 EUR, price_before_eur: 10,633.22 EUR, price_percent_change: -28.30%

This cluster stands out with a significant price decrease of -28.30%. The original price was 10,633.22 EUR, but the current price dropped to 7,635.12 EUR. This could indicate either a market correction, a seasonal discount, or a temporary shift in demand. This price reduction may reflect lower-priced models or promotional pricing strategies.

In conclusion: Cluster 0, Cluster 1, and Cluster 2 represent moderately priced, high-priced, and ultra-luxury watches, all with stable pricing trends. Cluster 3 represents a category with significant price reduction, possibly due to external factors like market adjustments or promotional pricing.