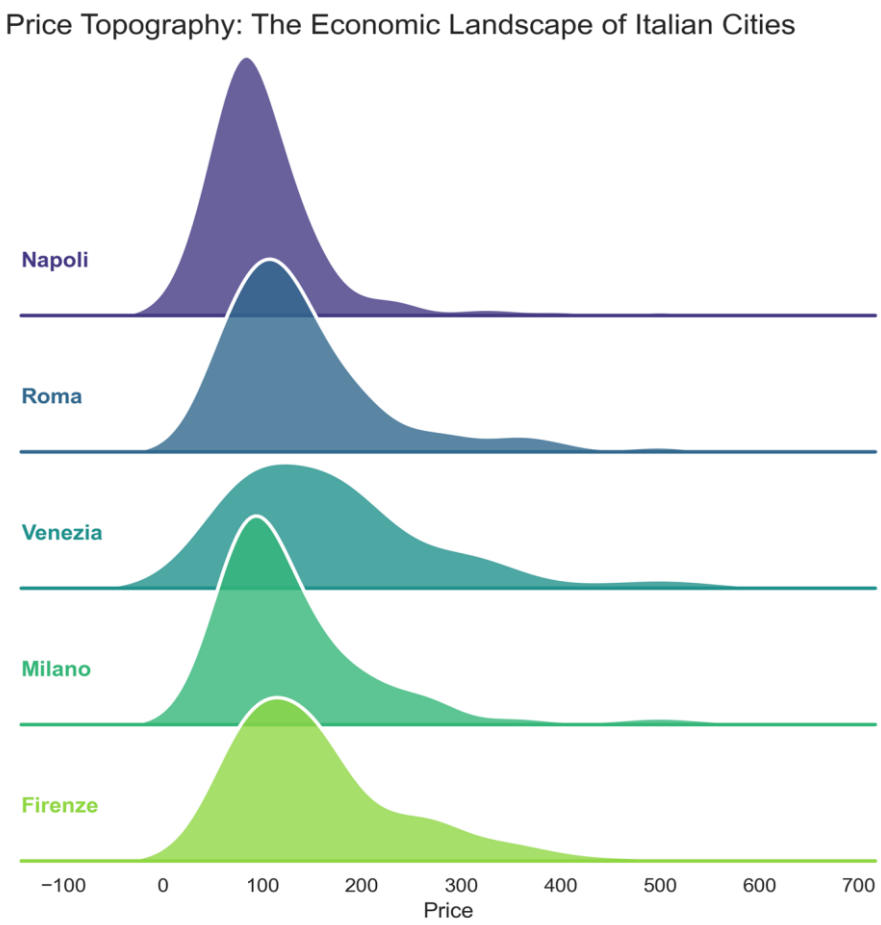

The Topography of Travel: An Economic Analysis of Italian Airbnbs

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Research questions

Beyond physical property characteristics (size, room type), what are the hidden structural drivers that determine listing prices in the Italian short-term rental market?

- **The "Brand" Effect:** “How strictly is wealth concentrated within specific 'Luxury Enclaves' (Neighborhoods), and does this create a 'Location Premium' that defies city-wide averages?”
- **The "Time" Arbitrage:** “How does seasonality impact pricing volatility across different cities (e.g., Leisure vs. Business hubs), and where can travelers find the best value-for-money?”

About Data

- **Dataset Chosen:** Italian Airbnb Listings Dataset (airbnbitaly_dm.csv).
- **Source:** Aggregated rental data (Simulated/Public Domain for academic use).
- **Initial Considerations:** "The raw data contained over **280,000 rows**. My primary concern was the presence of extreme outliers (luxury villas priced at €5,000+) which skewed the averages and made standard visualizations unreadable.“
- **Data Quality & Cleaning:**

  Encoding Issues: Handled Latin-1 character encoding to correctly preserve Italian city names (e.g., Venezia vs Venice).

  Filtering: Removed inactive listings (0 reviews) and extreme outliers (Price > €600) to focus analysis on the "accessible" travel market (approx. 95% of data).

  Normalization: Grouped data by Neighborhood and Season to allow for macro-level comparisons rather than individual listing analysis.

Methodology

- **Data Cleaning:**

  Removed rows with missing coordinates or 0 reviews (inactive).

  Aggregated data by Neighborhood and City to analyze macro trends.

  Filtered outliers (>€600) to normalize for the standard market.

- **Merging:**

  Simulated a multi-source process by enriching the raw data with OpenStreetMap API data (Museums/Restaurants).

  Merged these spatial counts onto the master dataset using KDTree algorithm

- **Software Used:**

  Python (Pandas for manipulation, Matplotlib/Seaborn for static charts) and OpenStreetMap API (for geospatial enrichment). Code available at GitHub

  PowerPoint/Canva for final narrative layout and design.

Insights from the Data

- **The "Luxury Enclave" Phenomenon:** Wealth is not evenly distributed. It is highly concentrated in specific historic districts (e.g., *San Marco* in Venice, *Brera* in Milan). These "Micro-Climates" command prices **2x higher** than the national average.

- **The Volatility of Venice:** Venice exhibits extreme price elasticity. It is the most expensive city in "Early Summer" but crashes to become affordable in "Early Winter.“

- **The Stability of Milan:** Unlike leisure destinations, Milan shows remarkably stable pricing year-round, reflecting its nature as a business/industrial hub less reliant on seasonal tourism.

- **Strategic Implication:** Smart travelers can "beat the market" by shifting travel dates (Time Arbitrage) or moving just outside top-tier neighborhoods (Location Arbitrage).

Timing the Market:
The Seasonal Price Matrix

The 'Green Pocket' Strategy:

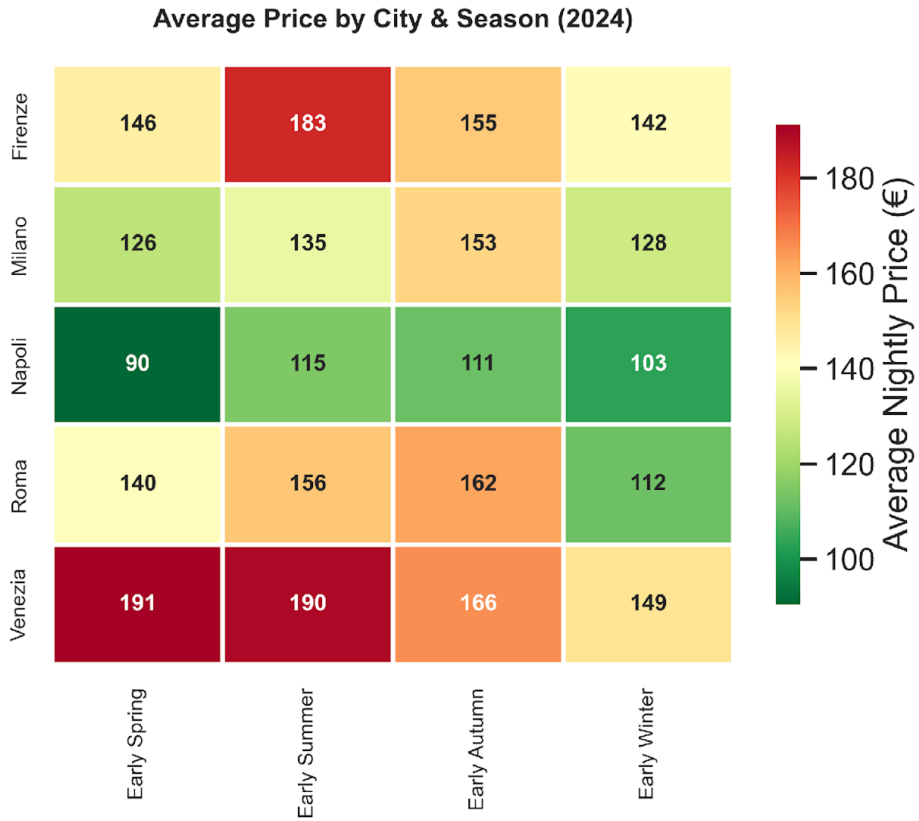
This heatmap acts as a calendar for value. Red cells indicate expensive 'High Seasons', while Green cells reveal bargain opportunities. Strategic travelers can save up to 40% by shifting their trip dates by just one season.

Venice vs. Milan:

Venice (Venezia) is highly volatile. It is extremely pricey in Summer but crashes in Winter. In contrast, Milan (Milano) remains relatively stable (Yellow/Light Green) year-round, reflecting its status as a consistent business hub.

Key Takeaway:

For maximum ROI, avoid the 'Red Zones'. The best value-for-money ratio is found in Early Winter for Venice and Early Autumn for Rome.



The Luxury Enclaves:
Wealth Is Concentrated

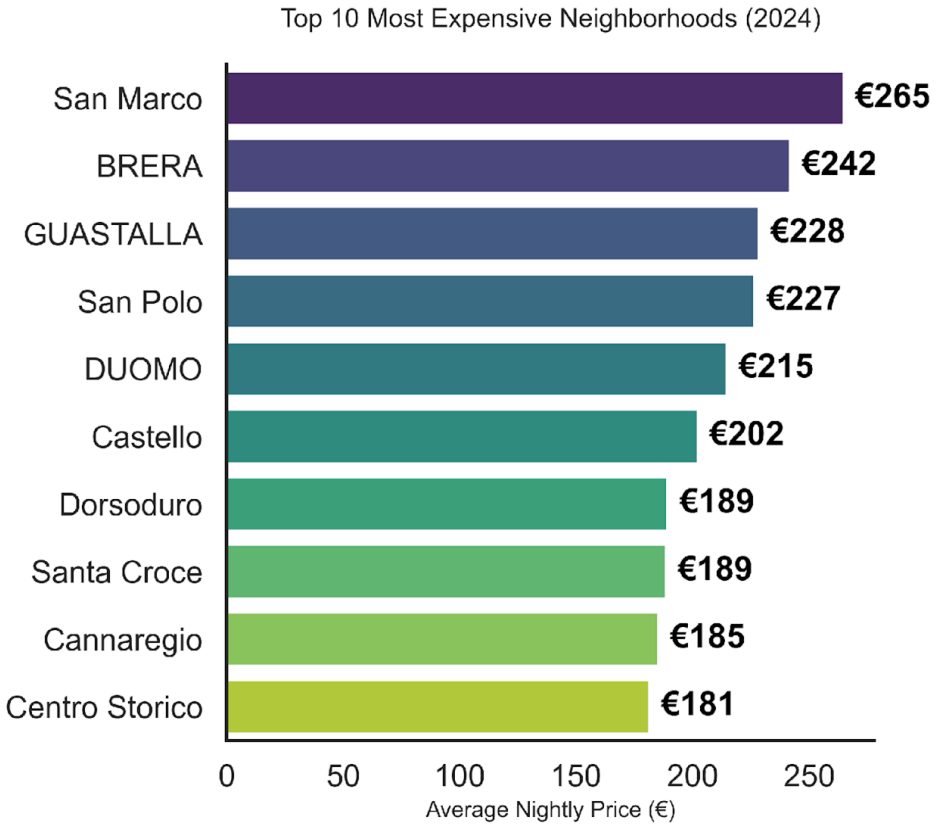
Uneven Distribution: Airbnb wealth in Italy is highly concentrated. A handful of elite neighborhoods in Venice (San Marco) and Milan Centro, command prices double the national average

The ‘Brand’ Premium:

While these areas are populous, their price premium outpaces their size This suggests that ‘Neighborhood Brand’ (e.g., being near the Duomo or St Mark's Square) is a stronger driver of revenue than the property quality itself.

Strategic Implication:

A one-size-fits-all pricing strategy is inefficient. Hosts in those specific Hotspots" should aggressively target premium travelers, while those just outside must compete on value and amenities



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