European Housing Price Comparison Web App

Team: DataViz Duo
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Problem & Stakeholder

Young professionals and students looking to relocate within Europe need a simple way to compare housing costs across different cities. Currently, they have to check multiple websites and manually compare prices, which is time-consuming and confusing with different currencies.

Main Question

Which European cities are most affordable for housing, and how do prices compare across neighborhoods?

Success Metrics: - Compare 15+ European cities - Show price trends over last 2-3 years - Dashboard loads fast (<3 sec) - Easy to understand without explanation

Data Sources

1. **Eurostat** - Official EU housing statistics (Open license, ~50k rows)
2. **Numbeo** - City-level property prices (Open for non-commercial, ~20k rows)
3. **OpenStreetMap** - For maps and geolocation

All data is publicly available and properly licensed.

Risks & Assumptions

- Some smaller cities might have missing data
- Prices are averages, real costs vary by neighborhood
- Data might be 3-6 months old (housing market updates quarterly)
- We assume users want to compare prices, not get exact listings

Visualizations

Main views: - Interactive map of Europe showing price differences by color - Bar chart comparing average prices across cities - Line chart showing price trends over time - Scatter plot for neighborhood-level details in selected cities

Dashboard will have filters for country, city, and time period. All charts will be interactive.

Team Roles

Sergei Litvinov: Data Engineer - Download and clean datasets (Eurostat, Numbeo, OSM) - Data pipeline and transformations using Python - Frontend dashboard design and styling - Help with visualizations

Vladyslav Hontar: Analyst/Modeler - Exploratory data analysis and finding insights - Statistical analysis and validation - Backend dashboard logic and functionality - Git repository setup and management - Documentation (README, report writing)

Shared: Building visualizations together, presentation prep, testing

Tools & Tech

- Python (pandas, plotly, dash)
- Git for version control
- Jupyter notebooks for analysis

Timeline

- **Week 1:** Get data, setup repo, confirm with instructor
- **Week 2:** Clean data, start exploring, basic charts
- **Week 3:** Build dashboard, test everything
- **Week 4:** Final touches, report, presentation

Expected Outcome: A working web dashboard where anyone can quickly compare housing prices across Europe and make better relocation decisions.