**Capstone Technical report**

**Introduction:**

**Topic**: Analysis of Denmark’s residential housing market trends from 1992-2024

**Context**: The data captures 32 years of transactions, revealing urbanization effects and economic influences on housing prices

**Importance:** Provides actionable insights for investors and policymakers addressing regional affordability crises

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**Problem Statement:**

Real estate stakeholders lack tools to:

1. Identify undervalued municipalities and widening urban-rural price gaps
2. Predict how macroeconomic shifts (interest rates, inflation) impact local markets
3. Optimize investments across property types

**Objectives:**

1. Map price/sqm variations across Denmark's 5 regions
2. Quantify correlations between interest rates and transaction volumes
3. Identify property types with optimal ROI

**Target Audience:**

* Real Estate Investors
* Municipal housing authorities
* Mortgage lenders

**Dataset:**

[Kaggle Dataset](https://www.kaggle.com/datasets/martinfrederiksen/danish-residential-housing-prices-1992-2024)

Size - 100,000 Transactions

**Data Handling:**

* Removed duplicates
* Standardized region names
* Calculated metrics
* Binded properties by size
* Looked at price over time

**Analysis & Findings:**

Key insights:

* Price trends (230% Increase)
* Regional disparities (16,847 sales in the capital, average price of 1,950,000 DKK)
* Property Types(Highest yield 5-6% in cities)

Visuals:

* Time series of price/sqm growth
* Map of regional price differences

**Recommendations:**

Investors:

* Target 1-2 bedroom apartments in the capital
* Consider summerhouse for short-term appreciation

Policymakers:

* Incentives development is South Jutland

**Limitations & Assumptions:**

Limitations:

* Missing geocodes for rural properties
* Data ends October 2024(excludes recent rate hikes)

Assumptions:

* Interest rate changes uniformly affect all regions
* ‘Summerhouse’ classification consistent across years

**References:**

1. [Kaggle Dataset: Danish Residential Housing Prices](https://www.kaggle.com/datasets/martinfrederiksen/danish-residential-housing-prices-1992-2024)
2. Danish Central Bank
3. Statistics Denmark