

INTRODUCTION

An accurate house price prediction is important for prospective homeowners, real estate developers, investors, banks, governments, tax assessors, insurers, and mortgage lenders. The main objective of this study is to analyze the property prices of Ireland from 2010 to 2022 collected from the PSRA website. Factors included in this study for house price prediction are county, year, province, location of property, property size and type.

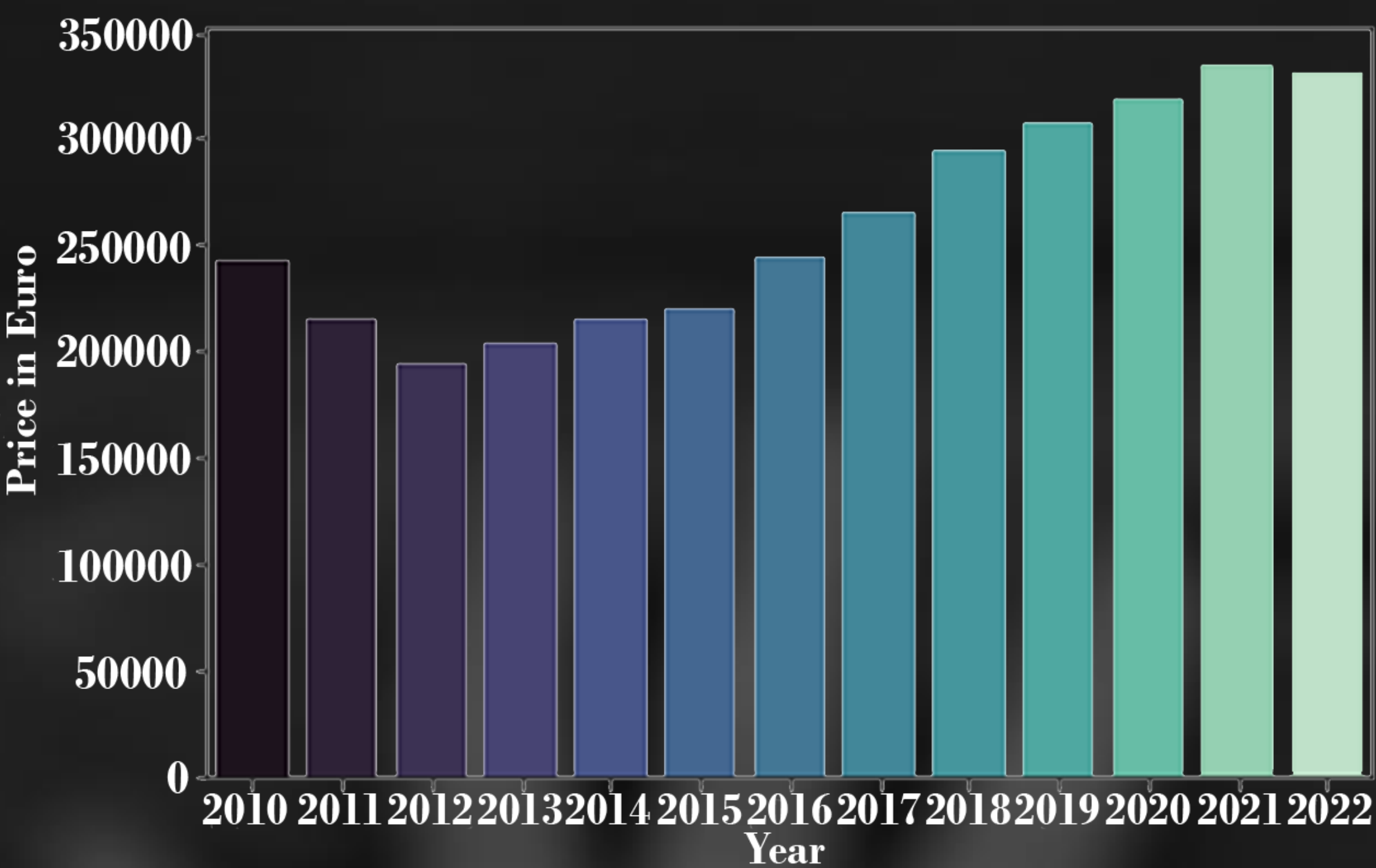


Figure 1. Property Price Vs Year.

RESEARCH QUESTIONS

- Has the property prices increased over the years?
- Which county has the highest prices for properties?
- Does the property price depend on which county the house is in? Is there any relationship between the counties and the prices?
- Is there any relationship between the size of the properties, type of properties (like new or second hand) and the property prices?

The entire project is based on CRISP-DM methodology. Statistical analyses such as ANOVA and MLR and various plots using seaborn and matplotlib were generated for the initial analysis of the property prices.

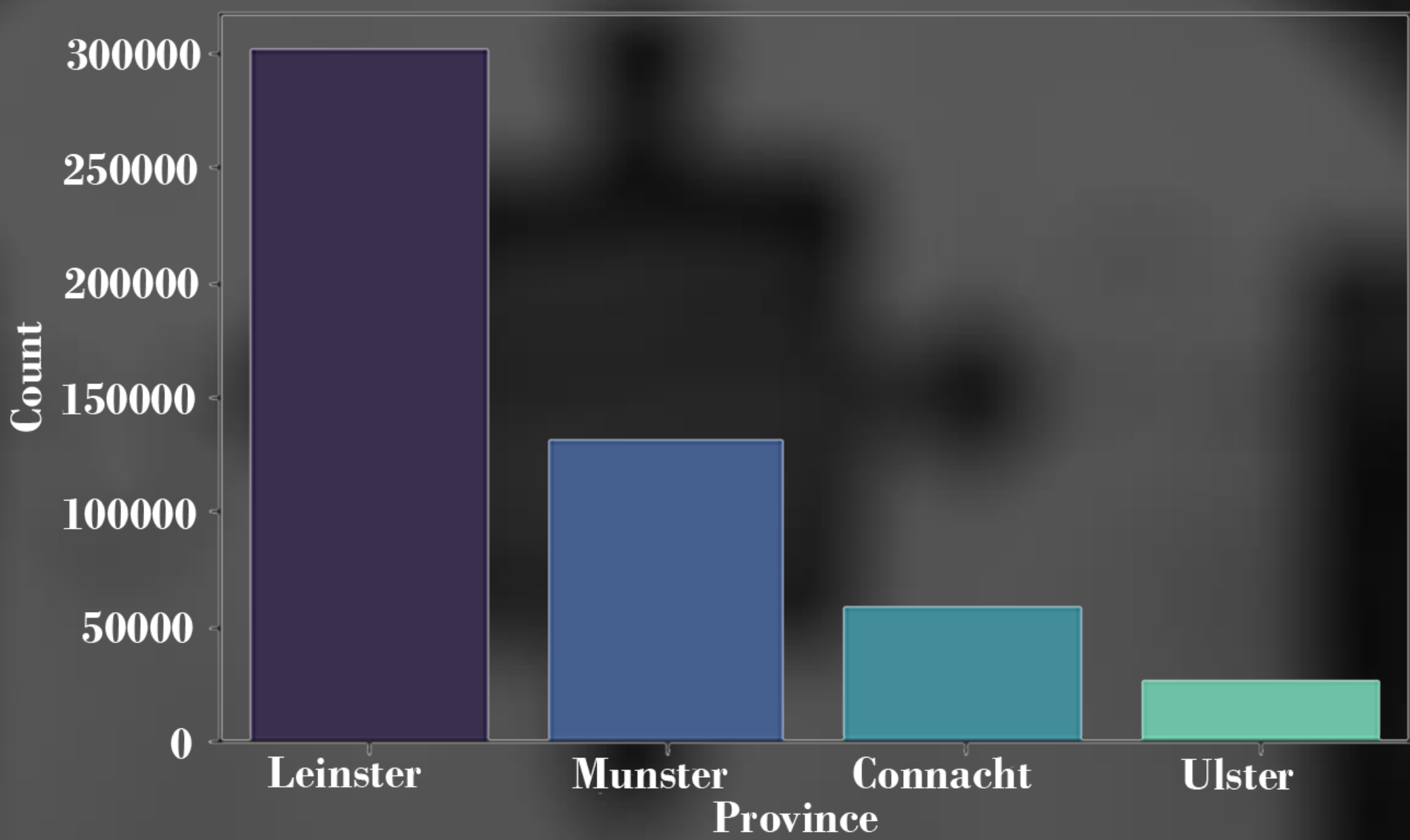


Figure 2. Provinces Vs Count



Figure 3. Property Type Vs Count

METHODS AND RESULTS

CONCLUSION

The results from the ANOVA and MLR implies that the attributes 'year', 'province', 'property_description' and 'location' has significant effect on the property prices. From different visualizations generated, it is evident that prices are increasing every year and higher number of houses are sold in Leinster province and the most sold houses are secondhand. It is also revealed that the Post codes in Dublin are also having an impact on the house prices. For future research, I will be using Hedonic regression, Random Forest, SVM and Linear Regression Machine learning techniques to analyze and predict the house prices.

ACKNOWLEDGEMENT

The Data used for this research was taken from the Residential Property Price Register page of PSRA website, <https://propertypriceregister.ie>.

REFERENCES

Phan, T.D. (2019). Housing price prediction using machine learning algorithms: the case of Melbourne city, Australia. Proceedings - International Conference on Machine Learning and Data Engineering.
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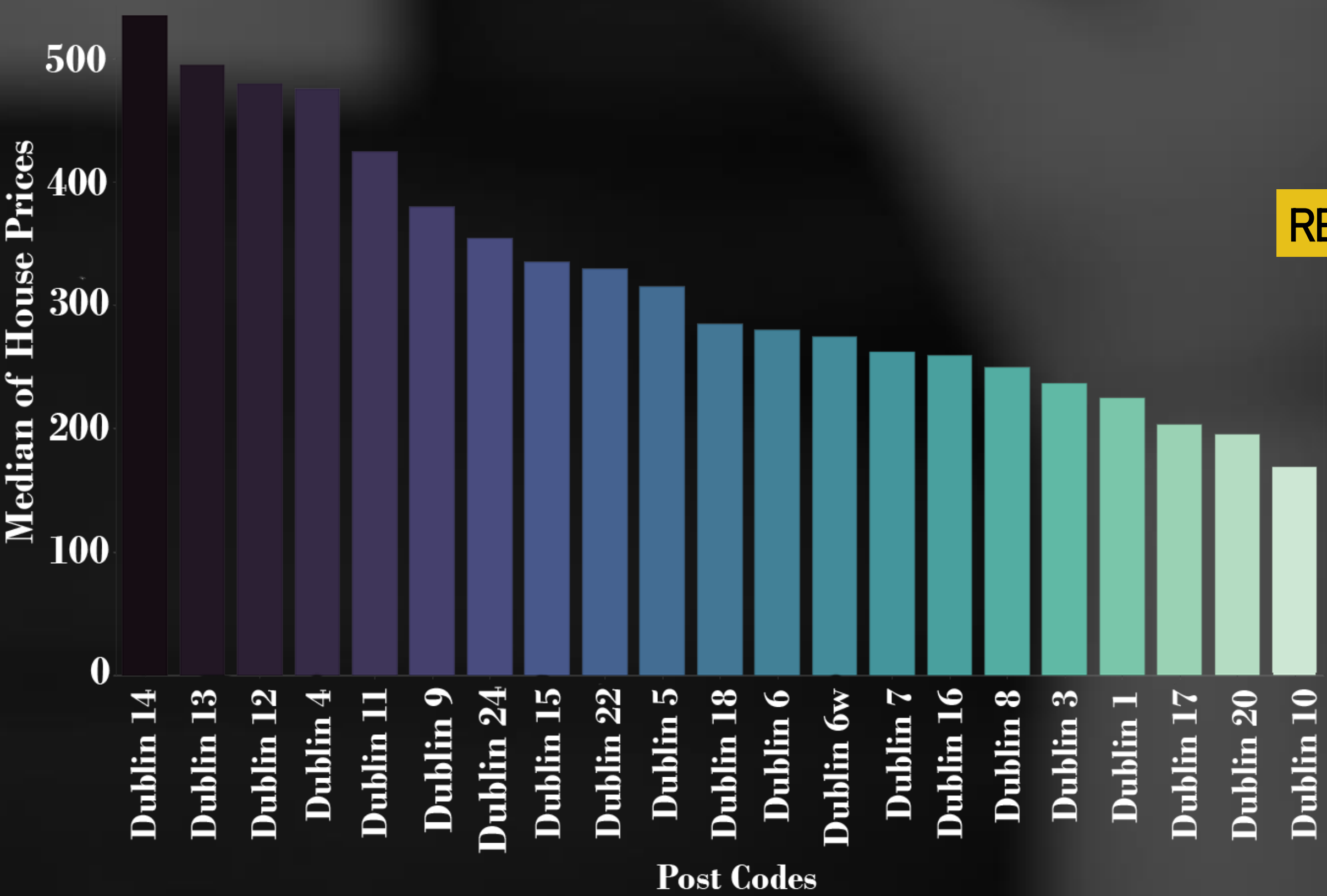


Figure 4. Post Code Vs Median of House Prices

ANALYSIS OF PROPERTY PRICES IN IRELAND



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METHODS AND RESULTS

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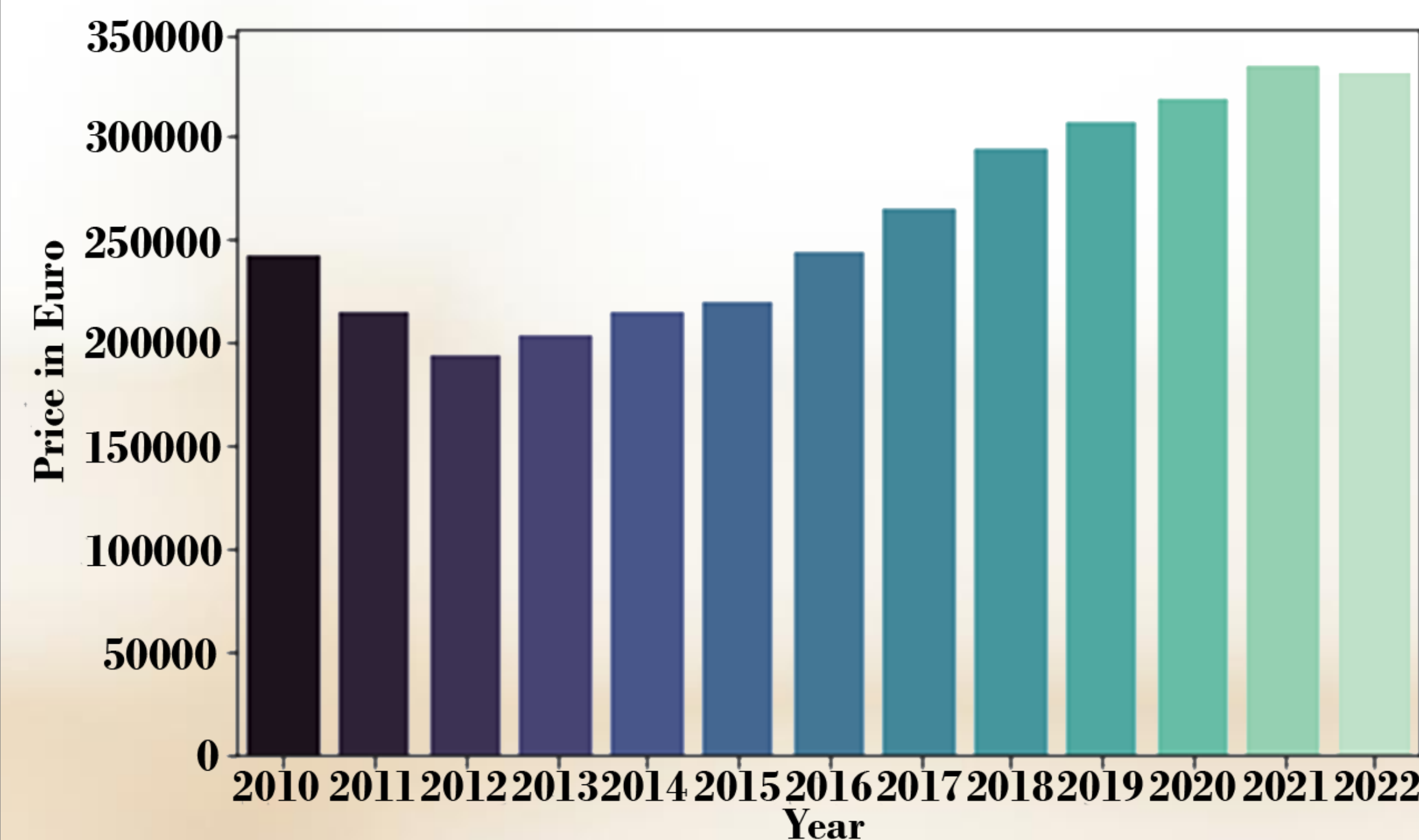


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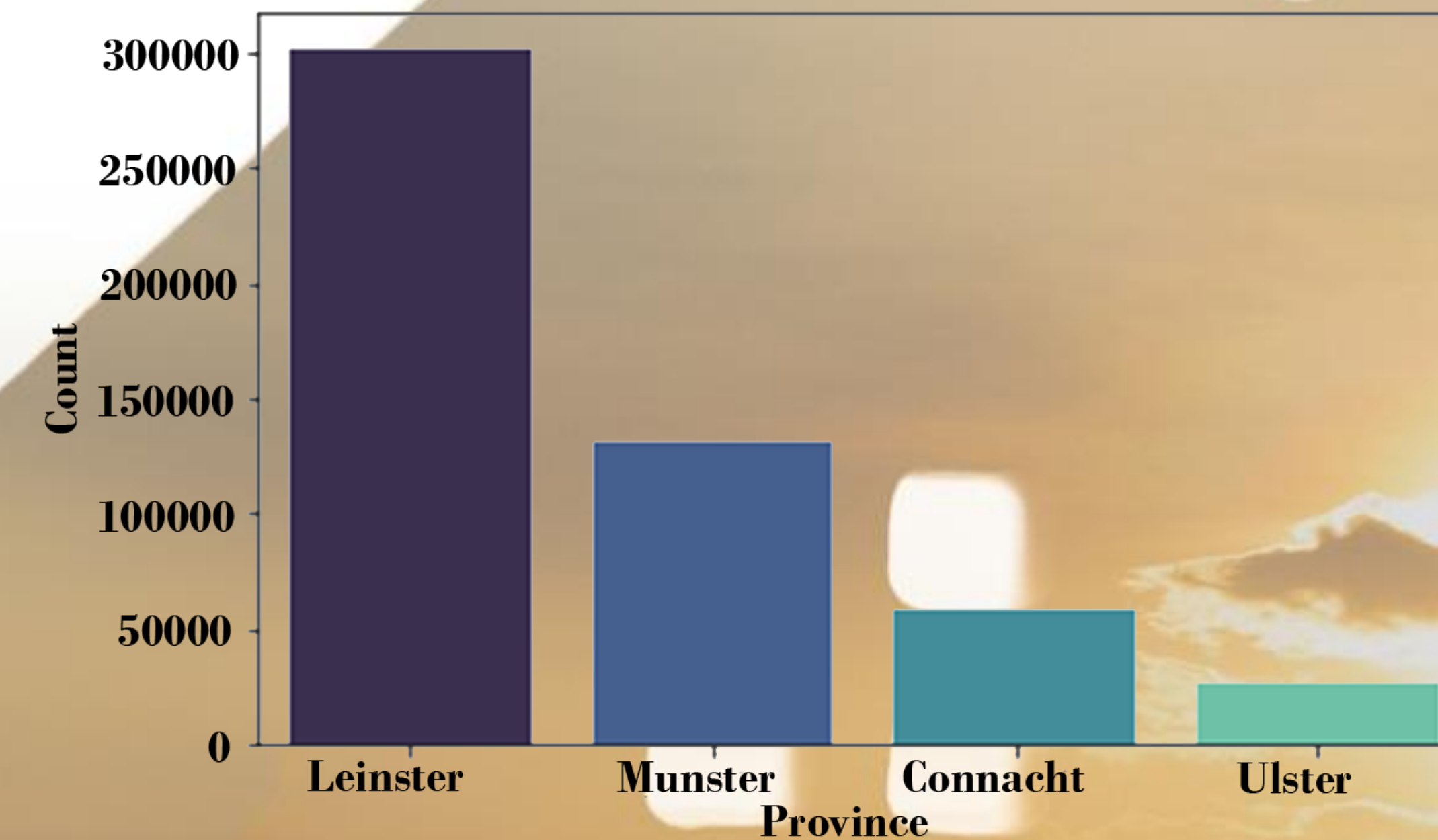


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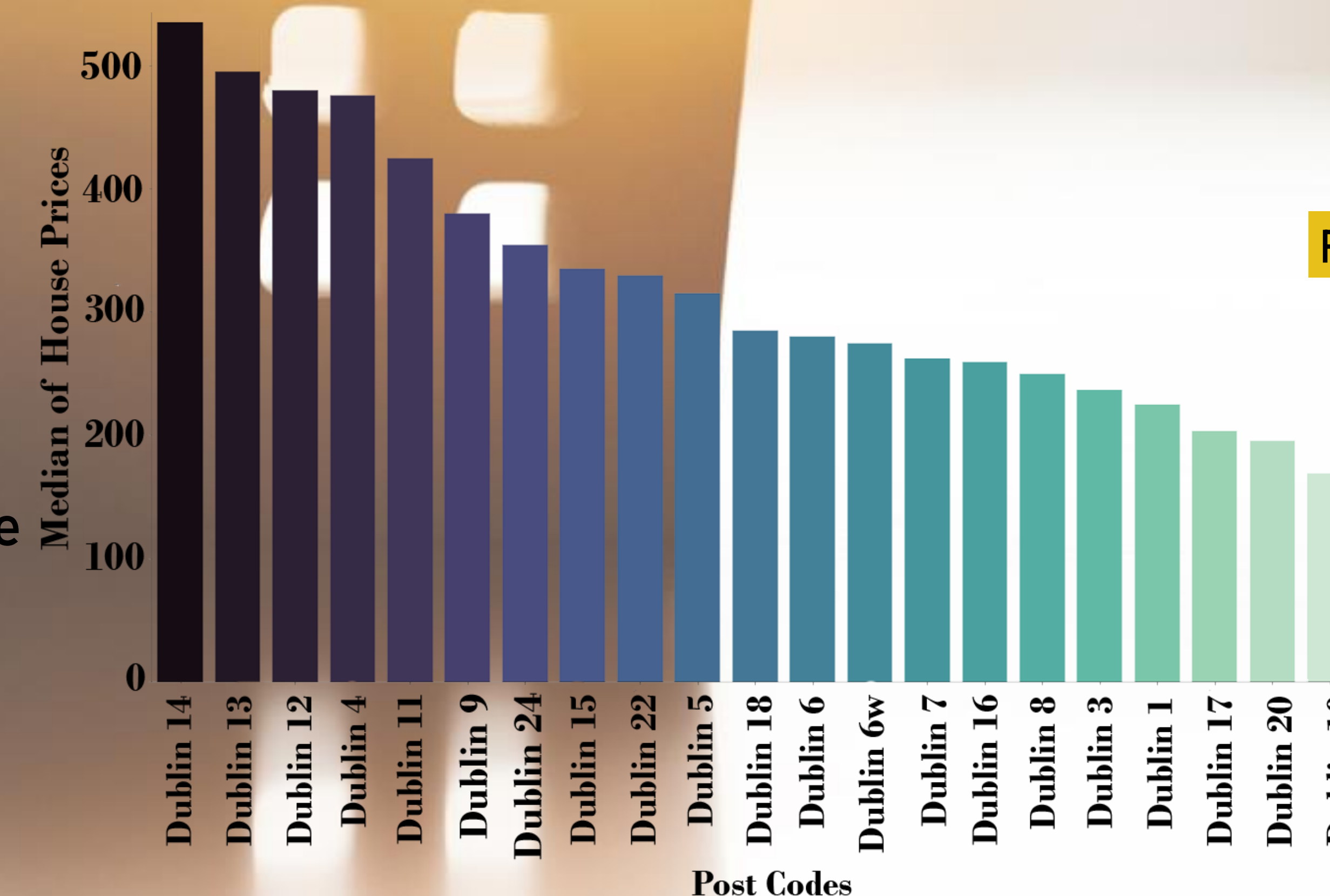


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