A logo for college computing

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**Assessment Cover Page**

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| *Module Title* | Strategic Thinking |
| *Assessment Title* | Rent Predictor: A Machine Learning Approach to Forecast Dublin Home Rent |
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| *Date of Submission* |  |

**Declaration**

By submitting this assessment, I confirm that I have read the CCT policy on academic misconduct and understand the implications of submitting work that is not my own or does not appropriately reference material taken from a third party or other source.

I declare it to be my own work and that all material from third parties has been appropriately referenced.

I further confirm that this work has not previously been submitted for assessment by myself or someone else in CCT College Dublin or any other higher education institution.

Rent Predictor: A Machine Learning Approach to Forecast Dublin Home Rent

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# Introduction

Rental homes are an integral part of the housing ecosystem, providing an alternative to homeownership.

# Problem Definition

From an economic, social and political perspective, housing is currently the greatest challenge faced by Irish policymakers. The housing challenge is manifested in a lack of supply of owner-occupier and rental properties; prohibitively high house prices and rents; and a serious problem of homelessness.   
A properly functioning housing market is an essential ingredient of a properly functioning economy and society. The challenge for policymakers is to ensure that there is an adequate supply and availability of suitable housing for those who want to buy and for those who want to rent at costs that are affordable. This situation does not exist now, so policymakers need to adjust the model to correct market failures. (IPOA and IPAV)

# Challenges In the Rental Market:

A new study by economist Jim Power and commissioned jointly by the Institute of Professional Auctioneers & Valuers and the Irish Property Owners’ Association has concluded the rental market is in a state of crisis exacerbated with the exit of noninstitutional landlords in significant numbers, reducing supply and putting upward pressure on rents.

The study finds some of the key issues which are listed below,

(Power et al.)

# Why is it Important to Address this Issue?

# How Can a Renter be Safe?

As the price of rent in Ireland continues to rise, we list here a few additional tips to help renters during the housing crisis: (Tait)

## Know What You Want

Have a clear idea of what you want. Which areas would suit you for work or schools, what your budget is, how much of a deposit you can afford, furnished or unfurnished etc?

## Have All Paperwork Ready

Have any relevant paperwork such as copies of ID, payslips etc. prepared and ready to go in a folder that you can always bring with you. Alternatively, keep one set of papers at work and another at home so you can quickly go from either place to a viewing.

## Check Average House Prices

Don’t go into a transaction blind. Before heading to a viewing, whip out your smartphone and check average house prices for the area, news reports on the area, and nearby transport and facilities. Also, remember to ask about parking availability if you have a car.

## Stay Within Budget

The general rule for housing is that you shouldn’t spend more than 30% of your monthly income on it. Due to escalating prices, you may have to budget for more, but establish limits. It makes no sense to get a nicer place if you can’t afford to eat or travel to work.

## Visit the Properties

Always visit a property and insist upon seeing inside it before agreeing to rent it. Pictures can be old or deceiving.

## Know Your Rights

As a renter, you should read contracts carefully. If you leave a deposit, demand a receipt. If you’re going to be sharing an apartment, it’s best to try and meet your new roommates beforehand. Also, make sure that you each have your own separate leases, or you could be stuck with paying all the rent if anyone ups and leaves.

(Tait)

# Project Scope

# Details of Dataset

Residential Tenancies Board is an independent public body that regulates the private rented sector. It is responsible for multiple activities like tenancies registration, dispute resolution, investigation and sanction of landlords. It has also published numbers number of reports and data. (Citizensinformation.ie)

For the specific case study, I will use the dataset available in the below link.

<https://data.cso.ie/table/RIQ02>

# Key Challenges

# Effort & Timeline

## CA1:

## CA2:

# Past Statistics

# References

(IPOA and IPAV)

IPOA, and IPAV. *THE IRISH PRIVATE RENTAL MARKET*. IPAV.ie, June 2022.

Available at: <https://www.ipav.ie/sites/default/files/ipav_ipoa_jim_power_updated_report_june_2022.pdf>

(Power et al.)

Power, Jim , et al. *Housing Policy Needs to Adjust to Address Market Failures in the Rental Sector -New Study*. 22 May 2022.

Available at:  
<https://www.ipav.ie/sites/default/files/press_release_-_launch_18th_may_2022_ipav_ipoa.pdf>

(Citizensinformation.ie)

Citizensinformation.ie. “Residential Tenancies Board.” *Www.citizensinformation.ie*, 9 2023, www.citizensinformation.ie/en/housing/renting-a-home/resolving-disputes/residential-tenancies-board/.

Available at:

<https://www.citizensinformation.ie/en/housing/renting-a-home/resolving-disputes/residential-tenancies-board/>

(Tait)

Tait, David. “The 2022 Housing Crisis of Ireland: Fact or Fiction?” *Selectra*, 25 May 2022, selectra.ie/moving/tips/housing-crisis-ireland.

Available at:  
<https://selectra.ie/moving/tips/housing-crisis-ireland>

## Chapter 1.1

### Chapter 1.1.1.

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[NOTE: For the table of contents to function properly, you must use the correct headings for all your chapters and subchapters.

**Heading 1:** This is the main heading and should be employed for the primary title or chapter. For example: CHAPTER 1.

**Heading 2:** Use Heading 2 as a subheading. For instance: Chapter 1.1.

**Heading 3:** Heading 3 provides a more detailed breakdown, such as Chapter 1.1.1.

By adhering to this hierarchical structure, you ensure an organized and effective document outline, enhancing readability and navigation. However, you are not forced to use all 3 headings, usually heading 1 and 2 are sufficient.

The remainder of your text should be written using a normal font.]