

# How much / rental income / ?

Tina Liu



# Target Customer

small scale **real estate**  
investor

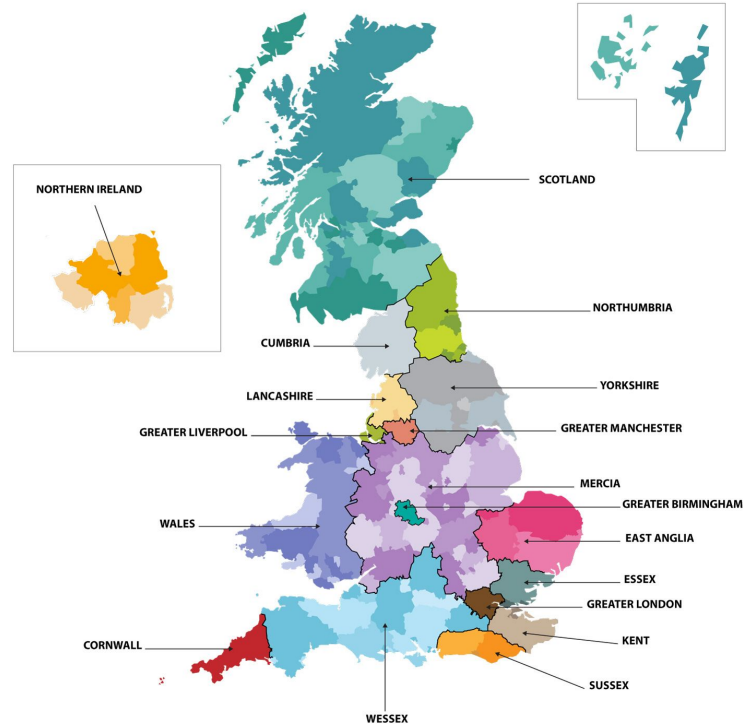
Tom and Lisa are accountants  
living and working in London.

They already own their home, and  
is looking for a **buy-to-let**  
**investment** to generate some  
good investment returns.



# Questions going through Tom & Lisa's head...

- Which area to buy?
- How much rent could they get?
- What kind of houses to buy?



# predicting rental prices

Aim to **predict the rental income** of a property so investor can use this to calculate a **rental yield%** to compare between possible investments

Data: 70k Zoopla listings in major cities of UK

# Model Overview

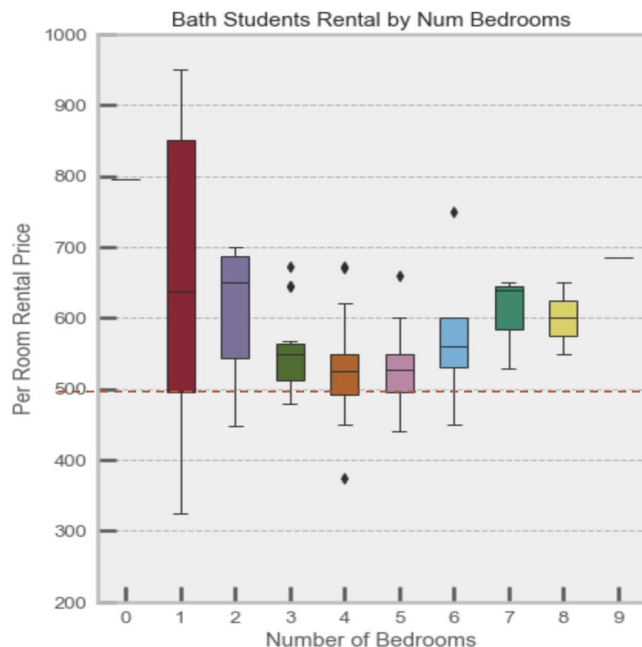
The model tries to predict rental price using Zoopla listings information:

- Location (latitude and longitude)
- Number of bedrooms
- Number of bathrooms
- Number of reception rooms
- Property type
- Whether its a student let
- Furnished or Unfurnished

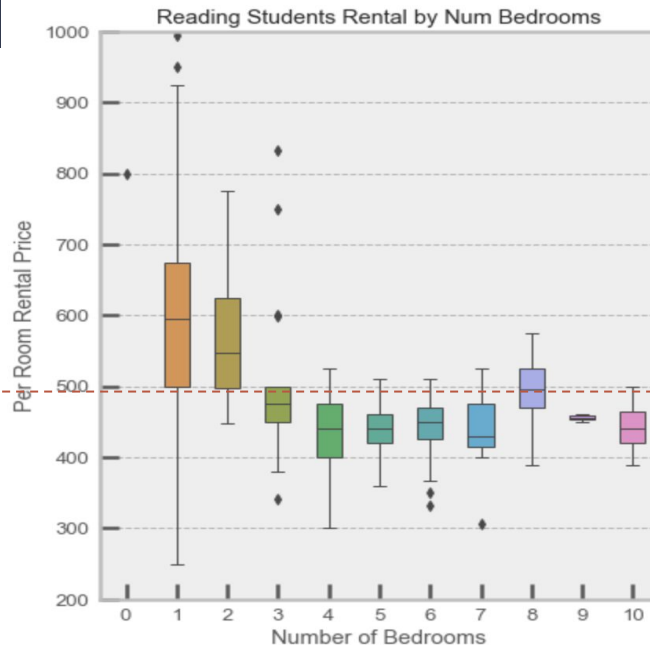
Note: properties with > 10 bedrooms are excluded, as these mansions are likely to behave differently to the average house.

# Where should you buy? Bath versus Reading

Bath



Reading



- Student properties achieves higher rents in Bath
- The average 4 bed rents for £2,100 in Bath, £1,750 in Reading

# Deal by deal comparison

## Deal One: Reading

3 Bedroom, 1 Bathroom  
Terraced House  
Near University  
Asking Price £270,000

Model predicts rental of  
**£1,182** per month

Gross Yield of 5.3%



## Deal Two: Bath

3 Bedroom, 1 Bathroom  
Flat  
Bus ride from University  
Asking Price £250,000

Model predicts rental of  
**£1,450** per month

Gross Yield of 6.9%

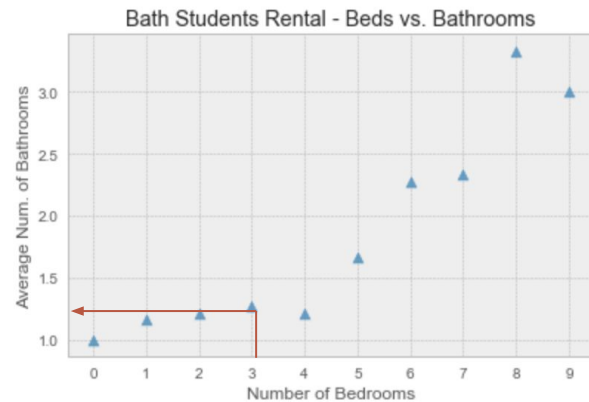
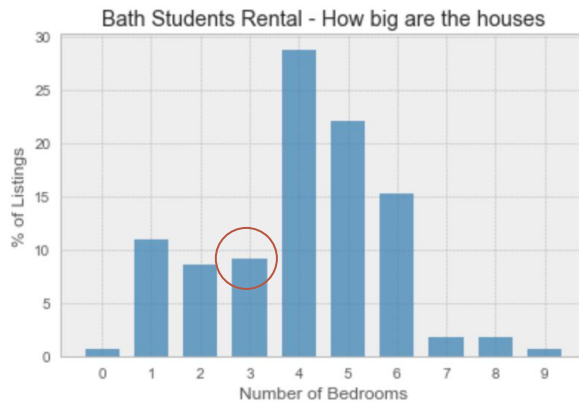


# What kind of houses to buy?

In a competitive rental market it always pays to have a  
**more unique product**

For example

- 3 bed student rental in Bath only accounts for 9% of the existing stock, much lower than 4 bed house
- Consider also adding a bathroom or ensuite





# Should you add in additional bathroom?



- For 3 bed student rentals in Bath, 73% of the listing has only 1 bathroom.
- Adding an extra bathroom certainly differentiates the property.
- Model also predicts it would **add £70 p.m.** so if the cost of adding an bathroom is £3k, it would generate **28% ROI** (return on investment).

Something definitely worth doing!

Thank you

# Appendix

# Effectiveness

The “effectiveness” of the model varies largely across UK cities.

It performs **best in South West England**, in cities like Reading, Bristol, Southampton, where the model  $R^2$  is around 80% on the test dataset.

It performs **worst in London**, where  $R^2$  is around 35%.

In the Midlands, performance is mixed, while the model works well in Coventry, Leamington Spa and Peterborough (72%  $R^2$ ), it performs poorly for Birmingham, Leicester.

London being such a diverse city with huge price ranges between prime areas and non-prime areas that are often close to each other, the model struggles to capture the factors that matter most in rental prices.

# Findings & Limitations

---

Model only has high predictive power for certain U.K. cities and does not work well in London and most of the Midlands

## Further Study

In order to improve the model we need to input more features that would enable us to capture the “nice neighbourhoods” in a city.