



Integrated Analysis of  
Social Media and  
Hedonic House Prices  
for Neighbourhood  
Change  
(INTEGRATE)

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# Context: INTEGRATE

Research Aim

Analyse **neighbourhood spatio-temporal changes** to ..

## Context

Gentrification is a key driver of house price dynamics and strongly linked to area reputation

Yet traditional house-price models estimate value from *properly* and *location* attributes

Fail to capture *place*-related characteristics, e.g. reputation or what people *think* of an area

... detect **emerging house price bubbles** through ...

... the integration of **social media data** and **hedonic house price models**

... in three countries (UK, Vietnam, New Zealand)

# Data and Methods

## Data

- Longitudinal house prices: Wenfresh / Zoopla rental prices and house prices (from the CDRC)
- Text data:
  - Twitter (historical UK tweets)
  - Also: descriptions on AirBnB, descriptions of properties for sale (e.g. Rightmove), Events API, etc. – any suggestions??

## Methods

- ~~“Methods grounded in text engineering and natural language processing (NLP)”~~  
...

- Ask an LLM!

Analyse the following tweets to determine their relevance to gentrification.

Consider indicators such as mentions of urban development, demographic shifts, displacement concerns, socioeconomic changes, and cultural transformations.

Assign a score from 1 to 5, where 1 means not suggestive of gentrification and 5 means highly suggestive.

Provide your answer strictly in the format '1. Score', '2. Score', etc., without any additional explanation or commentary.

# Preliminary Results

- 70bn parameter open source llama model (facebook)
- Accessed through together.ai API

