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

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

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

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

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

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

Data and Methods

Methods

- Ask an LLM!

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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.
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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??

Preliminary Results

- 70bn parameter open source llama model (facebook)

- Accessed through together.ai API