



School of Computing, Engineering, and the Built Environment Edinburgh Napier University

PHD STUDENT PROJECT

Application instructions:

Detailed instructions are available at :

<https://www.napier.ac.uk/research-and-innovation/doctoral-college/how-to-apply>

Prospective candidates are encouraged to contact the Director of Studies (see details below) to discuss the project and their suitability for it.

Project details

Supervisory Team:

- Director of Study: Dr Temidayo Osunsanmi (Email: t.osunsanmi@napier.ac.uk)
- 2ND SUPERVISOR: Dr Bruce Ryan

Subject Group: Built Environment

Research Areas: Architecture, Building & Planning

Project Title: Integrated Machine Learning Model for Predicting Emotional Responses to Real Estate Listings

Project description:

The real estate market is increasingly becoming data-driven, with buyers and sellers relying heavily on online platforms for property listings. However, traditional methods of evaluating property attractiveness often need to account for the emotional responses of potential buyers. Emotional reactions play a critical role in the decision-making process, influencing buyer behaviour and, ultimately, the success of real estate transactions. This research proposal aims to develop an integrated machine-learning model that predicts emotional responses to real estate listings, offering valuable insights to optimize marketing strategies and enhance transaction outcomes.

While there has been significant progress in applying machine learning to real estate market analysis, there is a gap in literature and practice in adopting these technologies to understand and predict the emotional responses of potential buyers. Current models primarily focus on price prediction, demand forecasting, and property valuation, but fail to capture the psychological and emotional dimensions that influence buyer decisions.

This gap presents an opportunity to innovate by developing an integrated machine learning model that can predict emotional responses, providing a more holistic understanding of buyer behaviour and improving the effectiveness of real estate marketing strategies.

Candidate characteristics

Education:

Minimum 2:1 degree in the following subject areas: Real Estate Surveying, Construction Management, Computer Science, Quantity Surveying

Subject knowledge:

Real Estate Surveying, Construction Management, Computer Science, Quantity Surveying

Essential attributes:

- Competent in the use of Statistical Software
- Knowledge of programming languages like Python, Java and others
- Publication record in reputable journals
- High standards of verbal and written English communication with strong interpersonal skills
- Excellent time management skills