## Master's Thesis für den Studiengang Bauingenieurwesen

## Using Machine Learning Forecasting Real Estate Price

With the rise of digital infrastuctre, Artificial Intelligence (AI) has recently reemerged as one important PropTech development. This thesis aims at developing marchine learning method for (commercial) real estate using the hedonic model.

## Expectation:

- Establishing econometric modelling for (commercial) real estate price.
- Identitying the Willingness to Pay for key charactersitics of (commercial real estate).
- Forcasting (Commercial) real estate price in Munich area and validating the model using machine learning and comparing the predictive accuracy with linear regression.

## Suggested Literature:

R code Guidence: https://machinelearningmastery.com/machine-learning-in-r-step-by-step/

Park, B., & Bae, J. K. (2015). Using machine learning algorithms for housing price prediction: The case of Fairfax County, Virginia housing data. Expert systems with applications, 42(6), 2928-2934.

Shukla, S. S. P., Pandey, S. K., Bharadwaj, U., & Yadav, A. K. (2021). Assessment of Real House Price Using Machine Learning. In Advances in Geotechnics and Structural Engineering (pp. 685-696). Springer, Singapore.

Monson, Matt. "Valuation using hedonic pricing models." Cornell Real Estate Review 7.1 (2009): 10.

Fuerst, Franz, Office Rent Determinants: A Hedonic Panel Analysis (October 18, 2007).

Clapp, J.M. A Semiparametric Method for Valuing Residential Locations: Application to Automated Valuation. The Journal of Real Estate Finance and Economics 27, 303–320 (2003).

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