

# Advancements in Real Estate: Tokenization and Deep Learning Insights

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**Abstract:** *This survey covers three areas in real estate: to-kenization models, deep learning-based price prediction, and AI-based Know Your Customer(KYC) verification. The papers explore blockchain-based tokenization of real estate assets, high- lighting benefits like increased liquidity and fractional ownership. Deep learning techniques improve price prediction accuracy by analyzing patterns and using regression algorithms. AI-based KYC verification focuses on document analysis and identity recognition to automate processes and enhance accuracy. The survey emphasizes collaboration, advanced techniques, and the transformative potential of these areas in real estate.*

**Keywords:** Tokenization, Real estate investments, Blockchain, Artificial intelligence (AI), Fractional ownership, Liquidity.

## REFERENCES

- [1] Gurcan Avci & Yaman Omer Erzurumlu (2023) Blockchain tokenization of real estate investment: a security token offering procedure and legal design proposal, Journal of Property Research, 40:2, 188-207, DOI: 10.1080/09599916.2023.2167665
- [2] Smith, Julie and Vora, Manasi and Benedetti, Hugo E and Yoshida, Kenta and Vogel, Zev, Tokenized Securities and Commercial Real Estate (May 14, 2019). Available at SSRN: <https://ssrn.com/abstract=3438286> or <http://dx.doi.org/10.2139/ssrn.3438286>
- [3] Asset Tokenization of Real Estate in Europe Blockchains and the Token Economy, 2022 Max Zheng, Philipp Sandner
- [4] Konashevych, Oleksii. (2020). General Concept of Real Estate Tokeniza- tion on Blockchain. 10.13140/RG.2.2.33435.62244.
- [5] C. Song, C. Sun, and W. Zeng, "Research on the tokenization of real estate assets based on blockchain technology," in 2018 2nd IEEE Advanced Information Management, Communicates, Electronic and Automation Control Conference (IMCEC), Xi'an, China, 2018, pp. 1581-1586. doi: 10.1109/IMCEC.2018.8462897
- [6] Document Analysis and Recognition – ICDAR 2021, 2021, Volume 12824 ISBN : 978-3-030-86336-4 Guillaume Chiron, Florian Arrestier, Ahmad Montaser Awal
- [7] Bondarde, S., Ghadge, P., Saldanha, A., Markad, A., Varpe, D. (2023). Artificial Intelligence-Based OCR. In: Tuba, M., Akashe, S., Joshi, A. (eds) ICT Systems and Sustainability. Lecture Notes in Networks and Systems, vol 516. Springer, Singapore. <https://doi.org/10.1007/978-981-19-5221-033>
- [8] Van Hoai, D.P., Duong, HT. & Hoang, V.T. Text recognition for Vietnamese identity card based on deep features network. IJDAR 24, 123–131 (2021). <https://doi.org/10.1007/s10032-021-00363-7>
- [9] Swain, A. K., & Mohapatra, P. K. (2019). AI Based KYC - A Revolution in Customer Onboarding Process. International Journal of Innovative Technology and Exploring Engineering, 8(12), 294-297.
- [10] S. Chaubey, S. Bhalerao and N. Mangaonkar, "AutoKYC: Automation of Identity establishment and authentication in KYC process using Text extraction and face recognition," 2022 2nd Asian Conference on Innovation in Technology (ASIANCON), Ravet, India, 2022, pp. 1-6, doi: 10.1109/ASIANCON5314.2022.9909442.

- [11] Li Yu, Chenlu Jiao, Hongrun Xin, Yan Wang, & Kaiyang Wang. (2018). Prediction on Housing Price Based on Deep Learning. International Journal of Information, Control and Computer Sciences, 11.0(2). <https://doi.org/10.5281/zenodo.1315879>
- [12] A. Varma, A. Sarma, S. Doshi and R. Nair, "House Price Prediction Using Machine Learning and Neural Networks," 2018 Second International Conference on Inventive Communication and Computational Technologies (ICICCT), Coimbatore, India, 2018, pp. 1936-1939, doi: 10.1109/ICICCT.2018.8473231.
- [13] T. D. Phan, "Housing Price Prediction Using Machine Learning Algorithms: The Case of Melbourne City, Australia," 2018 International Conference on Machine Learning and Data Engineering (iCMLDE), Sydney, NSW, Australia, 2018, pp. 35-42, doi: 10.1109/iCMLDE.2018.00017.
- [14] Park, K. H., & Yoon, K. J. (2020). A comparative study of deep learning models for real estate price prediction. Sustainability, 12(15), 6053.
- [15] Dong, X., Li, S., Zhang, L., & Lu, Y. (2021). Predicting house price based on multiple regression and machine learning algorithms. Journal of Physics: Conference Series, 1865(1), 012083