

# Knowledge Graphs at Your Fingertips: Exploring Opportunities and Challenges of Embedded OLAP for Graph Analytics

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Embedded OLAP (eOLAP) database systems have emerged as a promising approach for integrating analytical capabilities directly into data science workflows. However, their potential for Knowledge Graph applications remains unexplored. This paper assesses the alignment between functionalities offered by prominent eOLAP systems and real-world Knowledge Graph use cases observed on the Kaggle platform. We survey leading open-source eOLAP systems examining their foundations, I/O capabilities, result rendering, and customization features. We then analyze notebooks which were carefully mined from Kaggle focused on Knowledge Graph tasks to understand typical workflows and tooling. By comparing eOLAP capabilities to observed Knowledge Graph practices, we identify promising application scenarios as well as key functionality and interaction gaps. Our findings provide insight into how eOLAP systems could be tailored to better support exploratory Knowledge Graph workflows, highlighting opportunities for future research and development in this emerging area. Further details can be found in Dmitri's MSc Thesis [1].

## References

- [1] D. Orlov (2024). Knowledge Graphs at Your Fingertips: a Survey of Kaggle Notebooks for Knowledge Graph Analytics. *MSc Thesis, TU Eindhoven*.