



## Hierarchical Graph Transformers

Graph Transformers are a recent development in graph learning that provides state-of-the-art performance on many tasks. Whereas transformers on natural language operate on sequences, graph transformers have to extract information from more general graph topologies. Graph Transformers face the additional challenge of expanding context sizes for larger graphs, making models that utilize full attention practically infeasible for larger graphs.

In this project, we want to come up with a hierarchical architecture that scales sub-quadratically in the input graph size. We will compare existing approaches and try to optimize performance on common graph learning benchmarks.

**Requirements:** Ability to work independently and determined to obtain results, creative thinking, knowledge of Machine Learning and Python. Ideally has worked with graph learning frameworks such as pyG before.

### Contact

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