

An algorithmic reasoning approach to GNNs

A project for the *Deep Learning* course

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Graph Neural Networks.



Graphs are a general language for describing and modelling complex systems.

Graphs are an important building block since they can naturally encode an entity-relationship structure, as well as an invariance to permutations (of both nodes and edges) and awareness of input sparsity.






GNNs are used for one of three tasks:




- *node classification*: predict the label of a given node
→ E.g., predicting whether a user is a bot in a social network
- *graph classification*: make independent predictions specific to each graph
→ E.g., property prediction based on molecular graph structures
- *edge prediction*: infer the edges between nodes in a graph
→ E.g., content recommendation in online platforms, predicting drug side-effects

Thank you for your attention!



References

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