Unsupervised Learning to Enhance Gene Pathway Prediction Using GNN

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Introduction

This project proposes to identify potential unseen protein-protein interactions within the KEGG pathway maps. The ability to predict such interactions can enhance our understanding of biochemical networks and may lead to the discovery of novel targets for drug development.

Data Source

The data for this project will be sourced from the KEGG PATHWAY database [1] (https://www.kegg.jp/kegg/pathway.html), which comprises a collection of manually drawn pathway maps representing our knowledge on the molecular interaction and reaction networks.

Data Curation

References

1. Kanehisa, M. and Goto, S.; KEGG: Kyoto Encyclopedia of Genes and Genomes. Nucleic Acids Res. 28, 27-30 (2000)