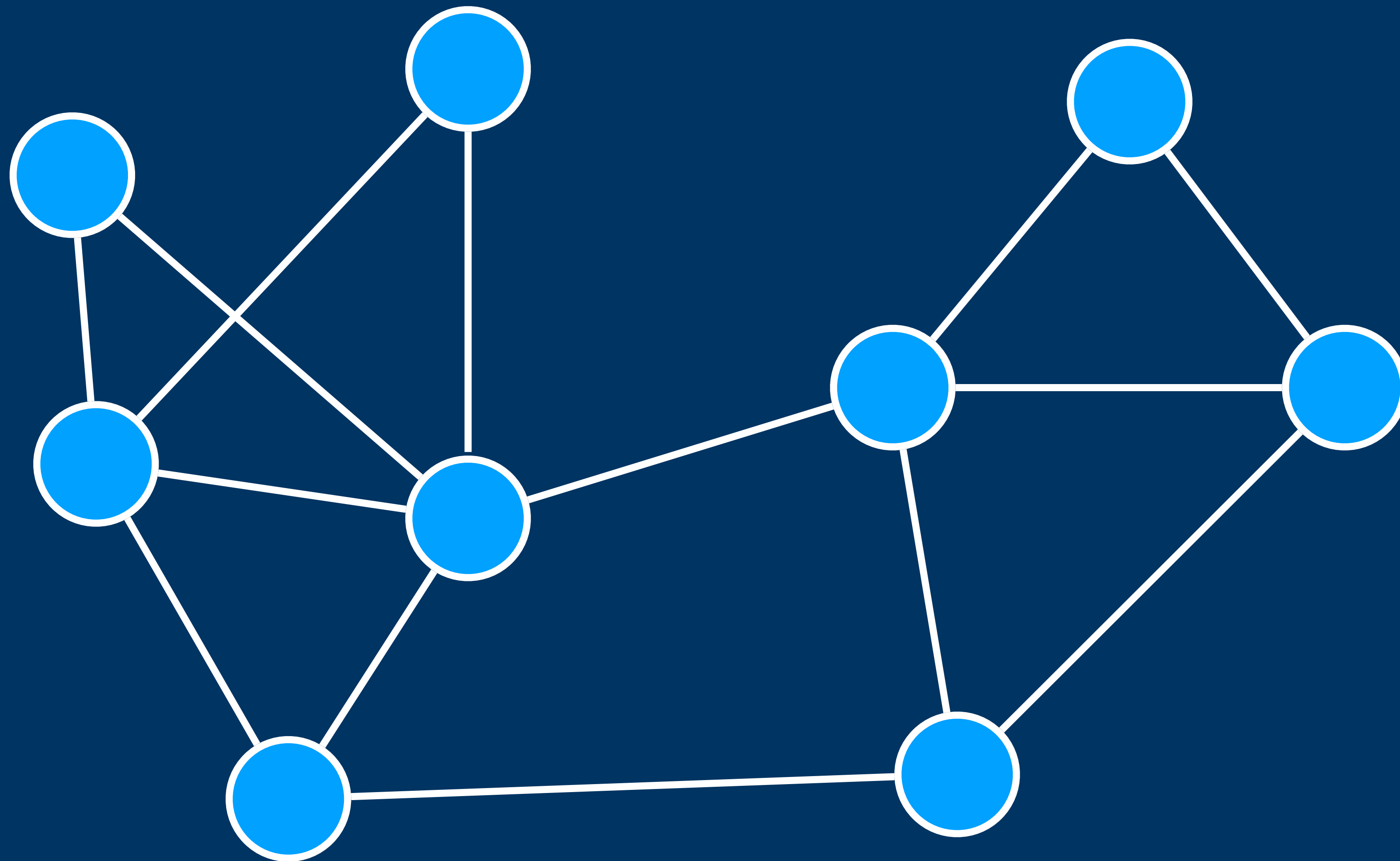


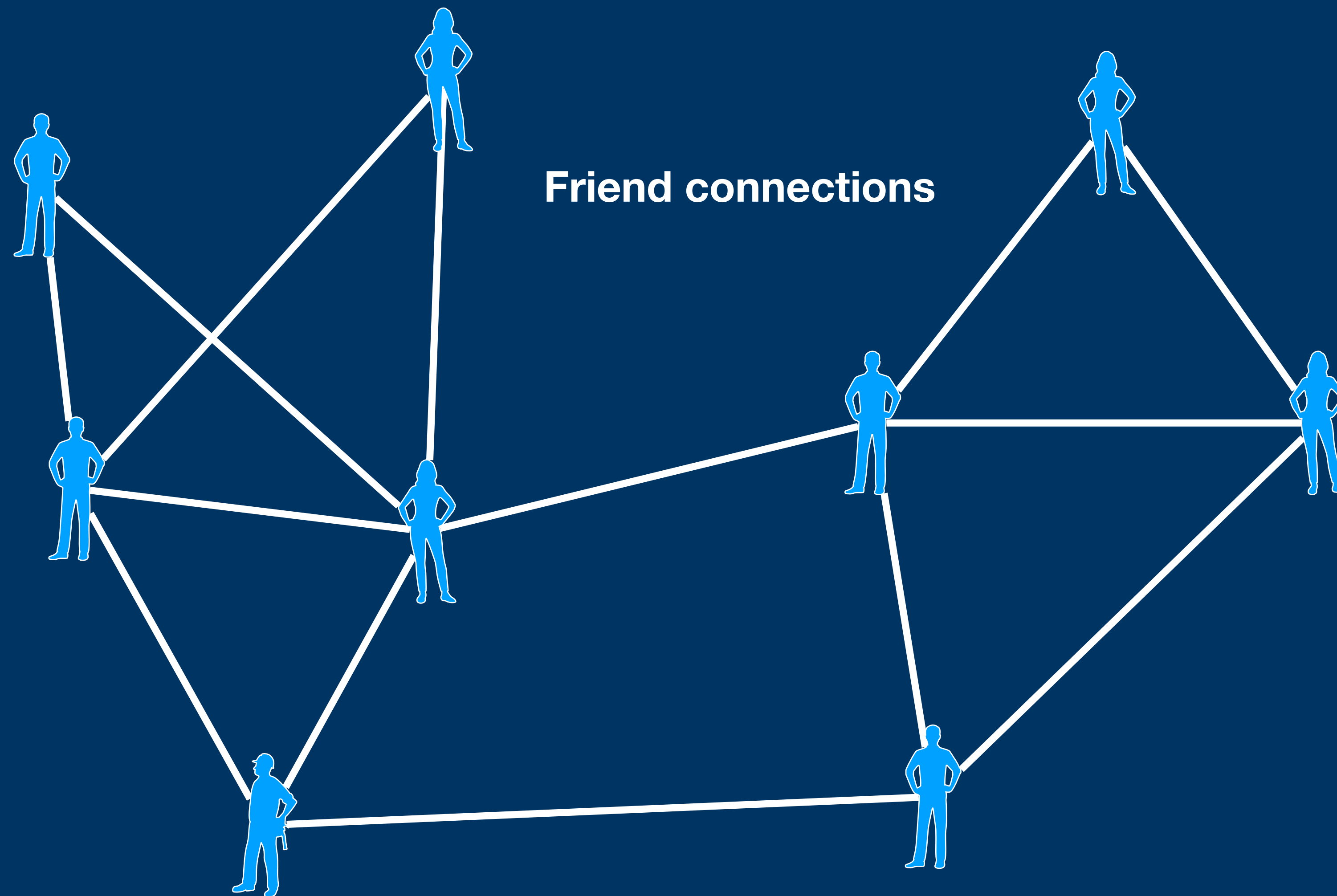
Machine learning with graphs

Nils Barr Zeilon

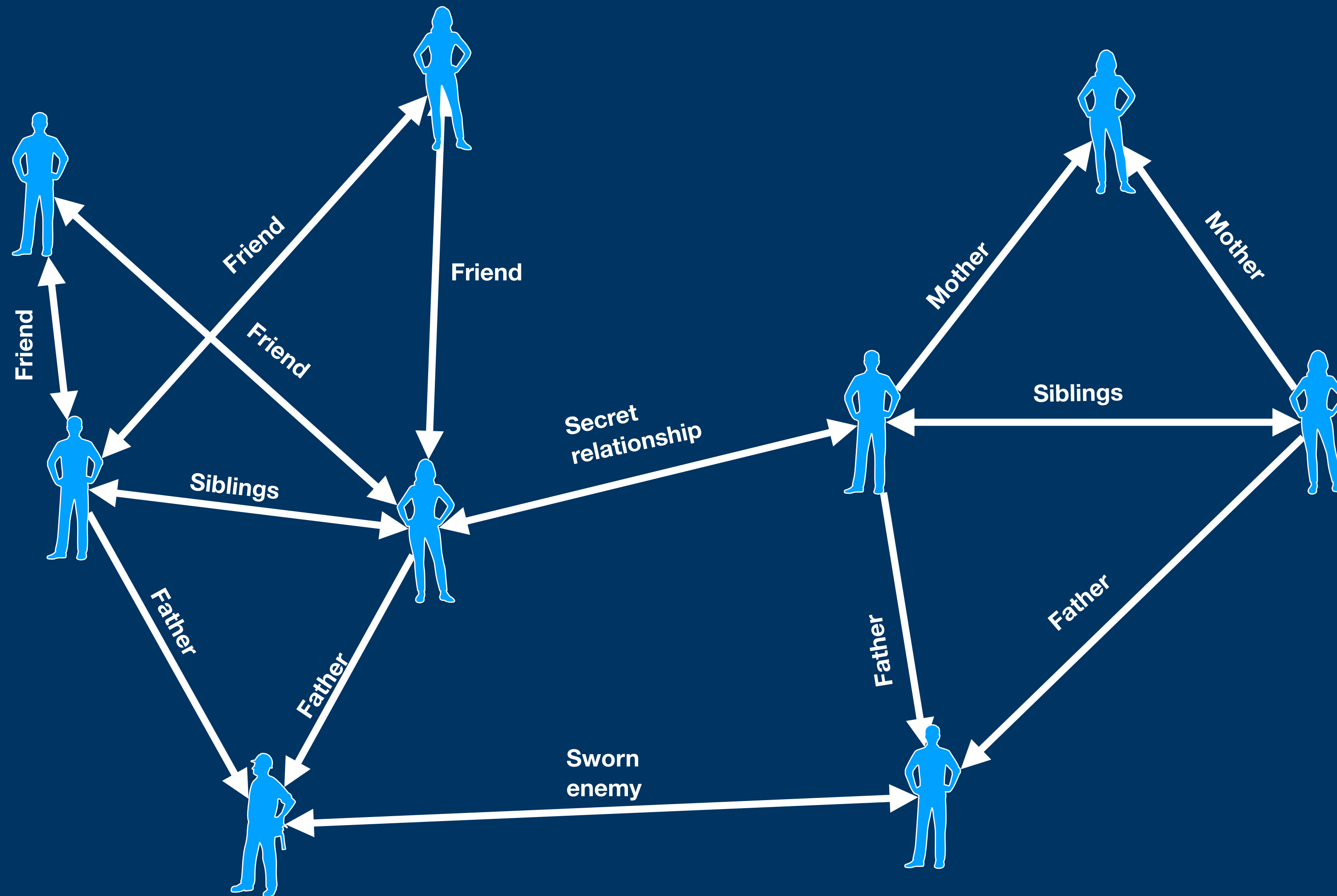
What are graphs?



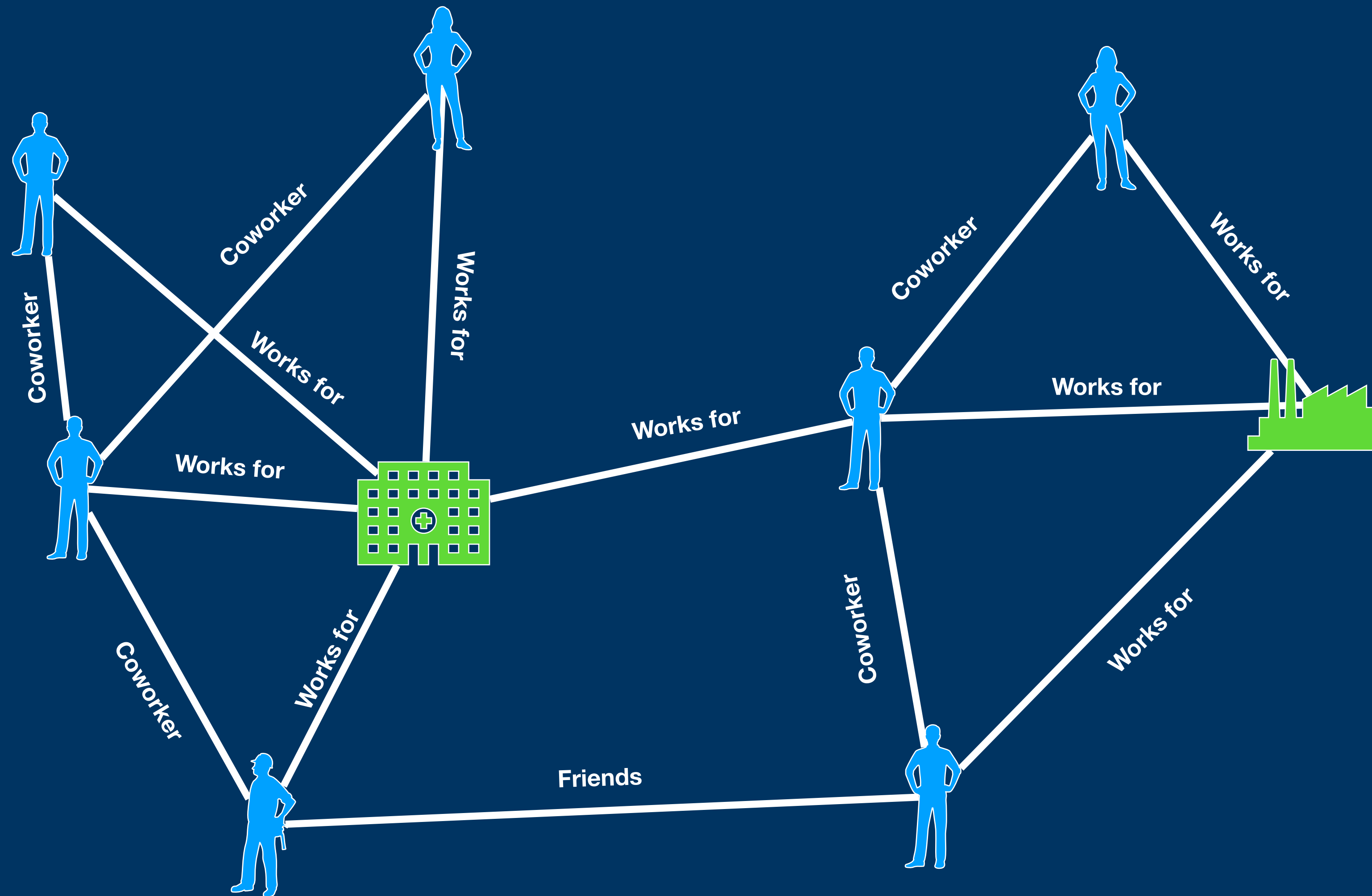
What are graphs?



What are graphs?

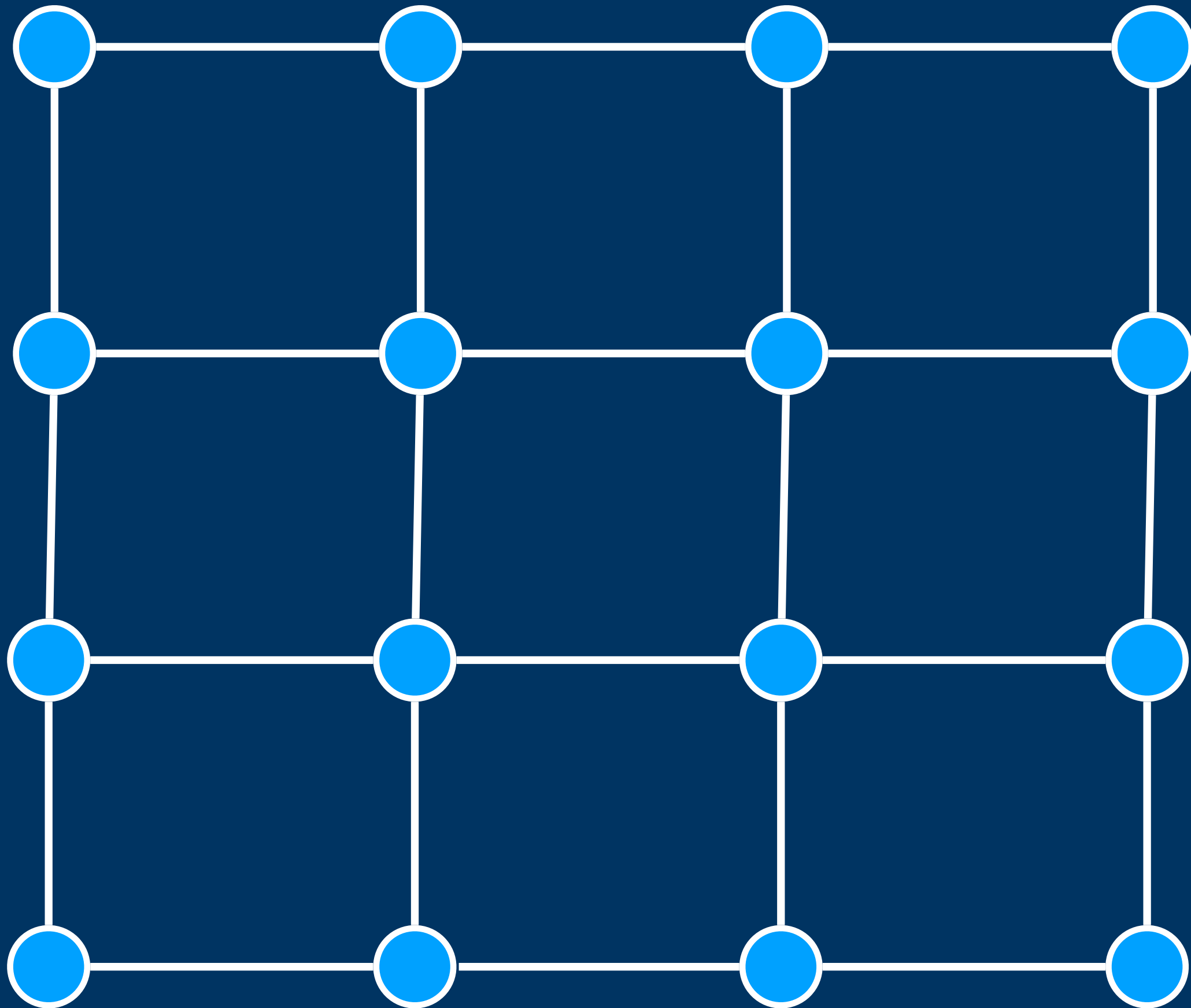


What are graphs?



What is machine learning?

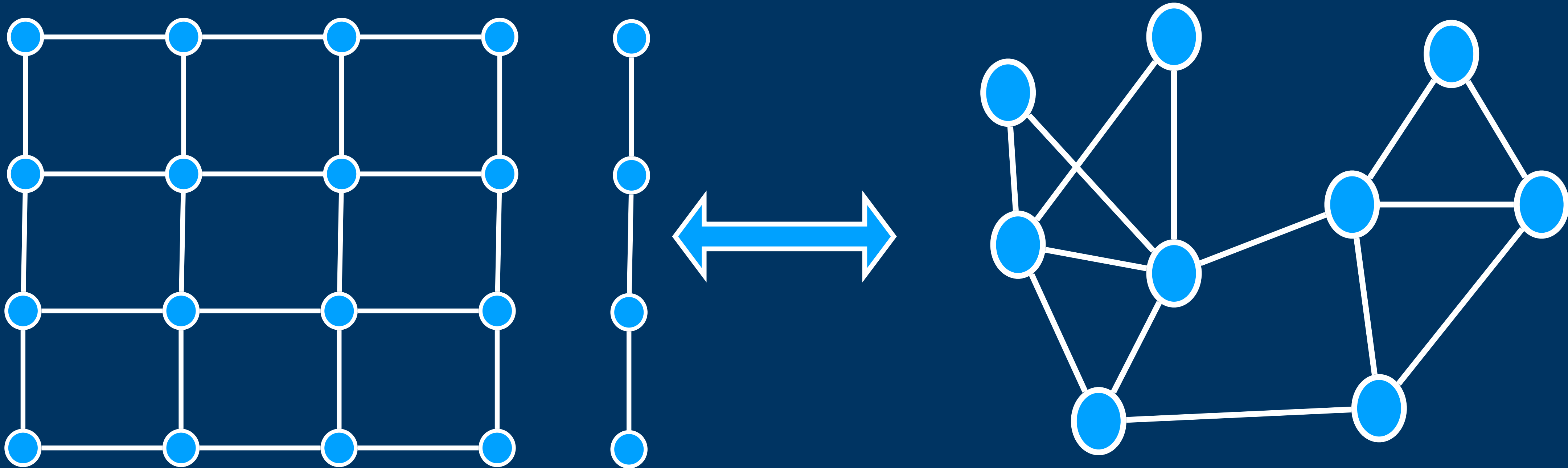
Images



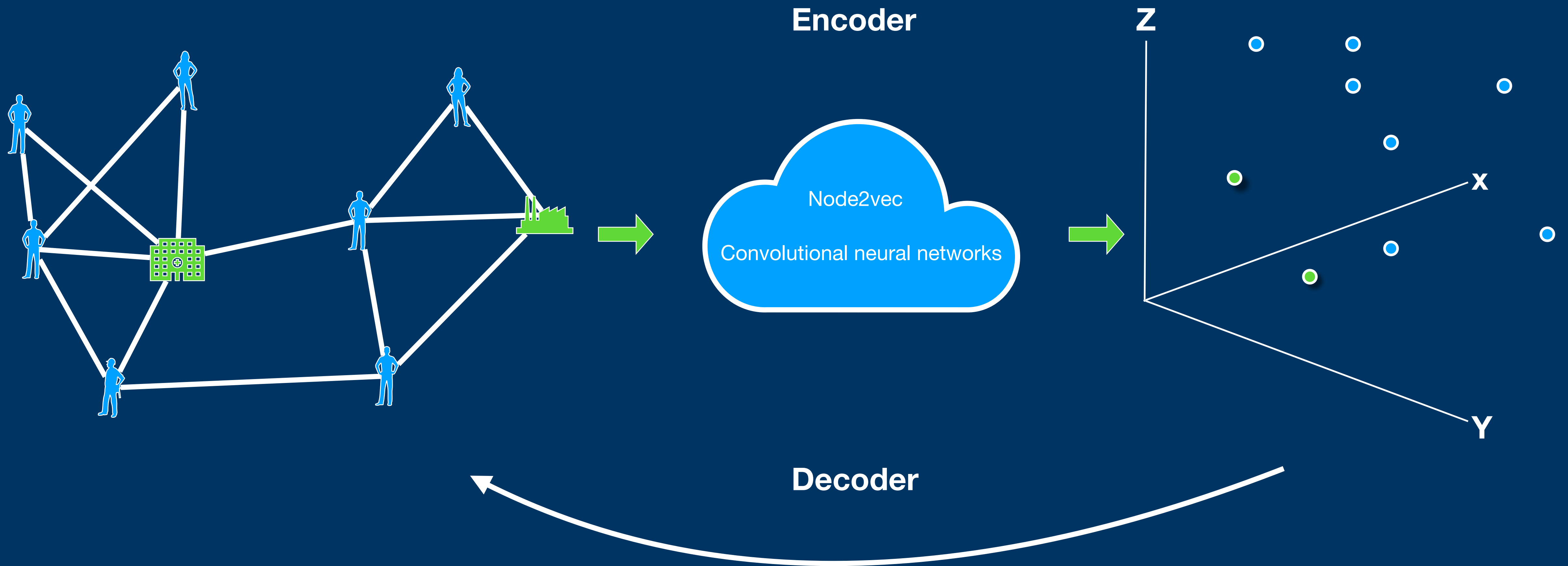
Text or Audio



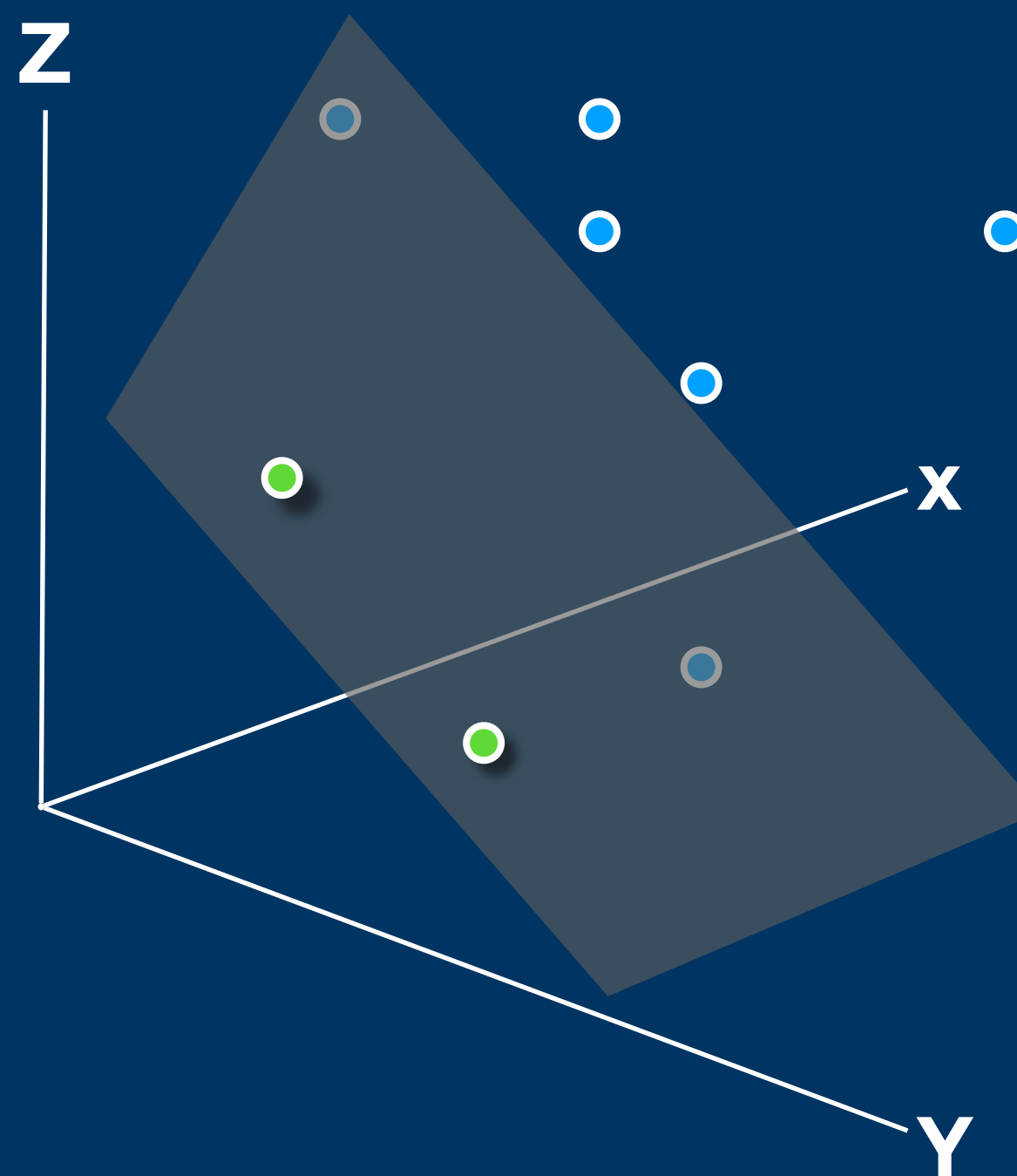
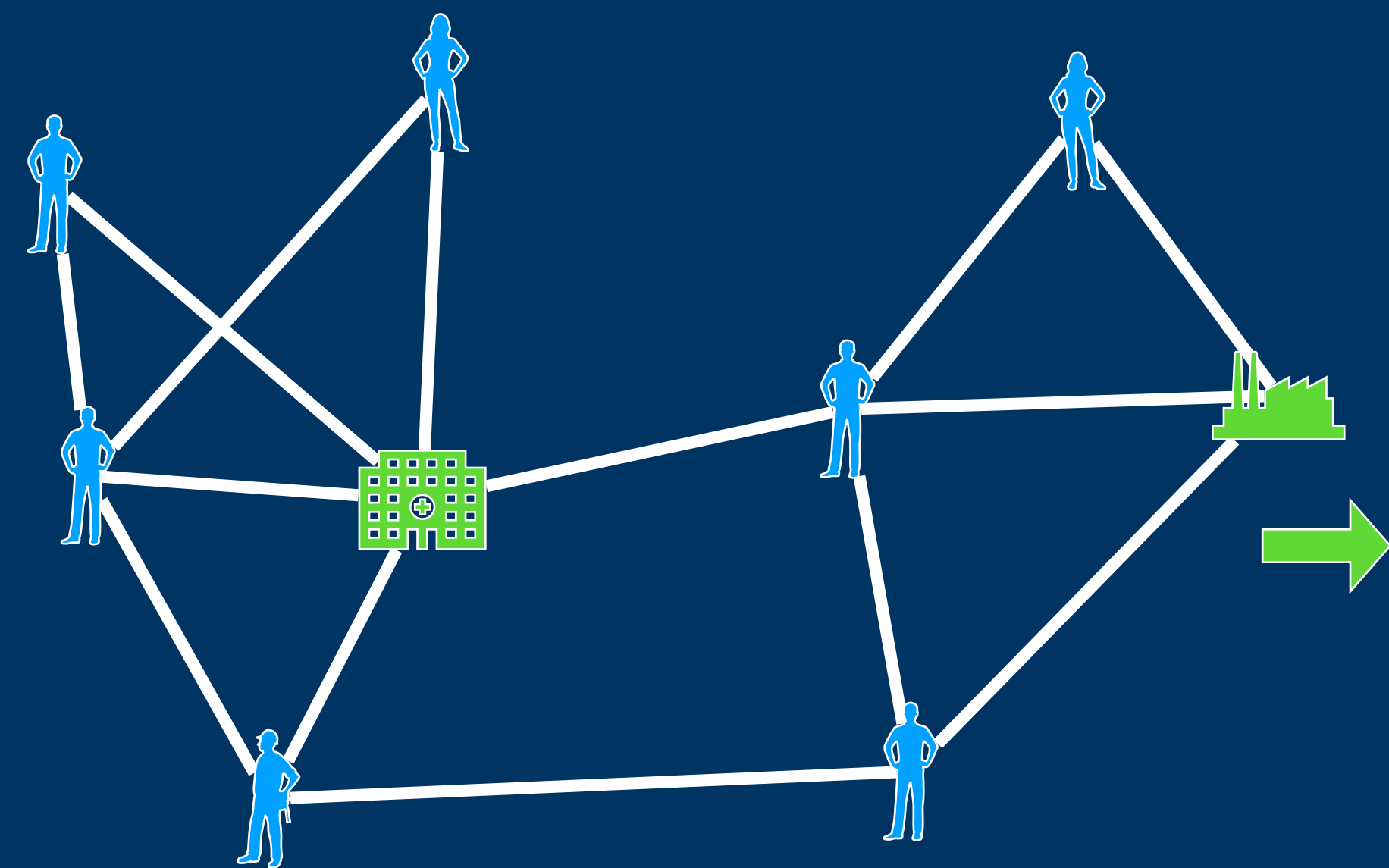
Machine learning on graphs



Predicting with graphs



Predicting with graphs



Node classification

Link prediction

Graph prediction

My Project

- Idea



- Problems

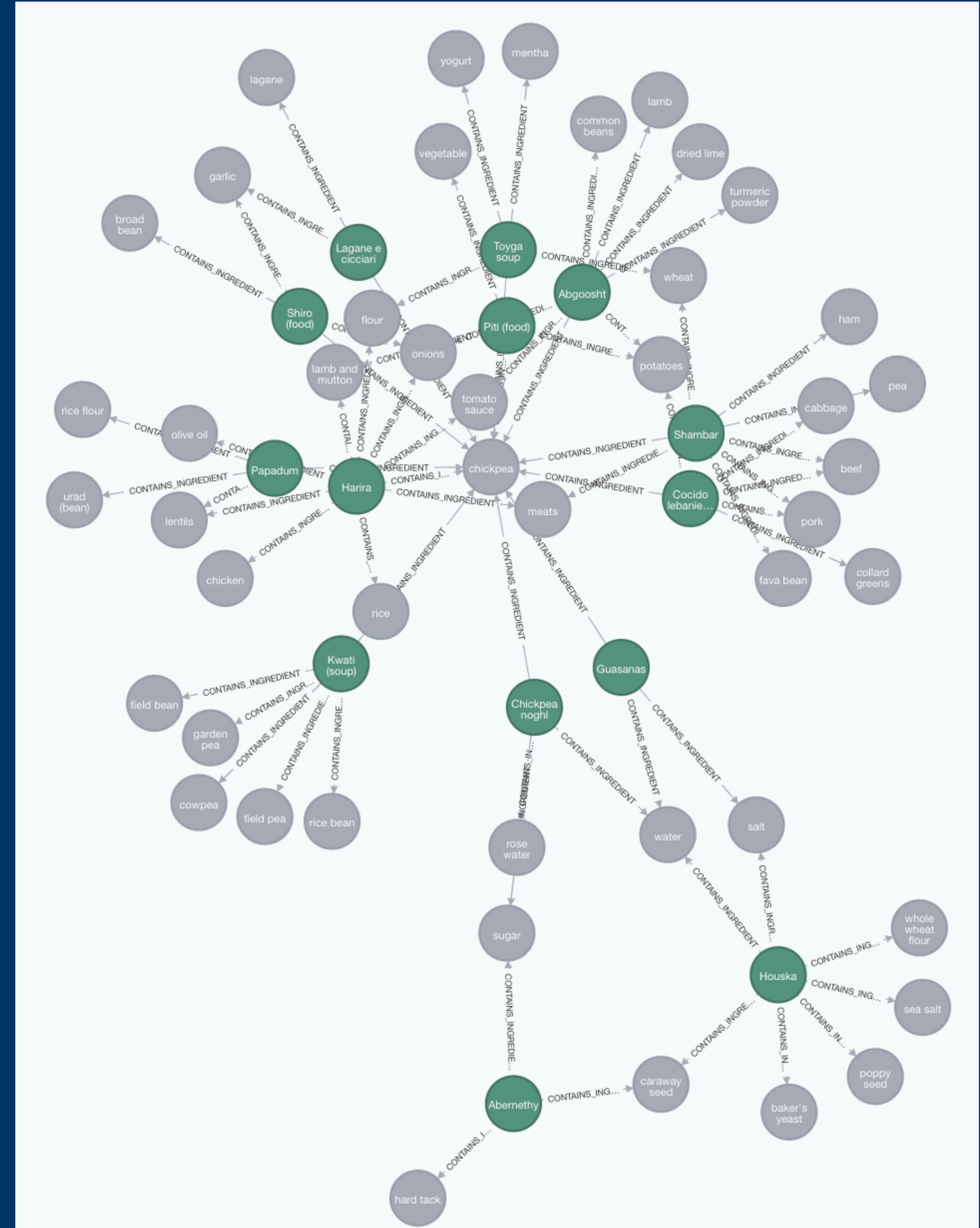


My Project

- **Theoretical background on graph ML**
 - Online Course from Stanford
- **Cypher query language**
- **Applied theory on sample graphs**
 - Embedding
 - Node classification tasks

Results/discussion

- Node embeddings
- Node2vec
- Node classification



Further work

- Investigate more robust embedding algorithms
- Work on link prediction
- Graphs are the new frontier
 - Used by Deep mind in Alpha fold

Thanks!