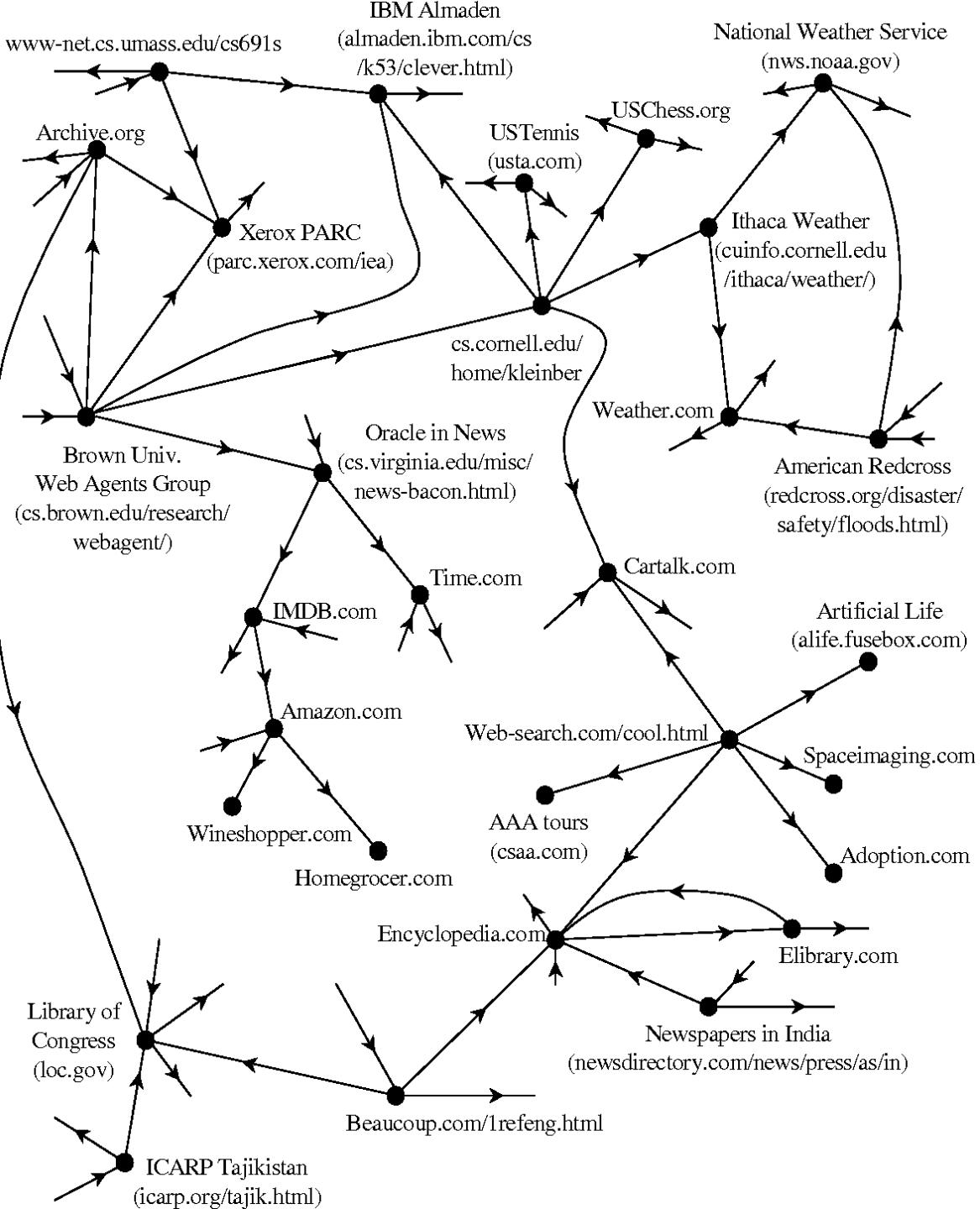
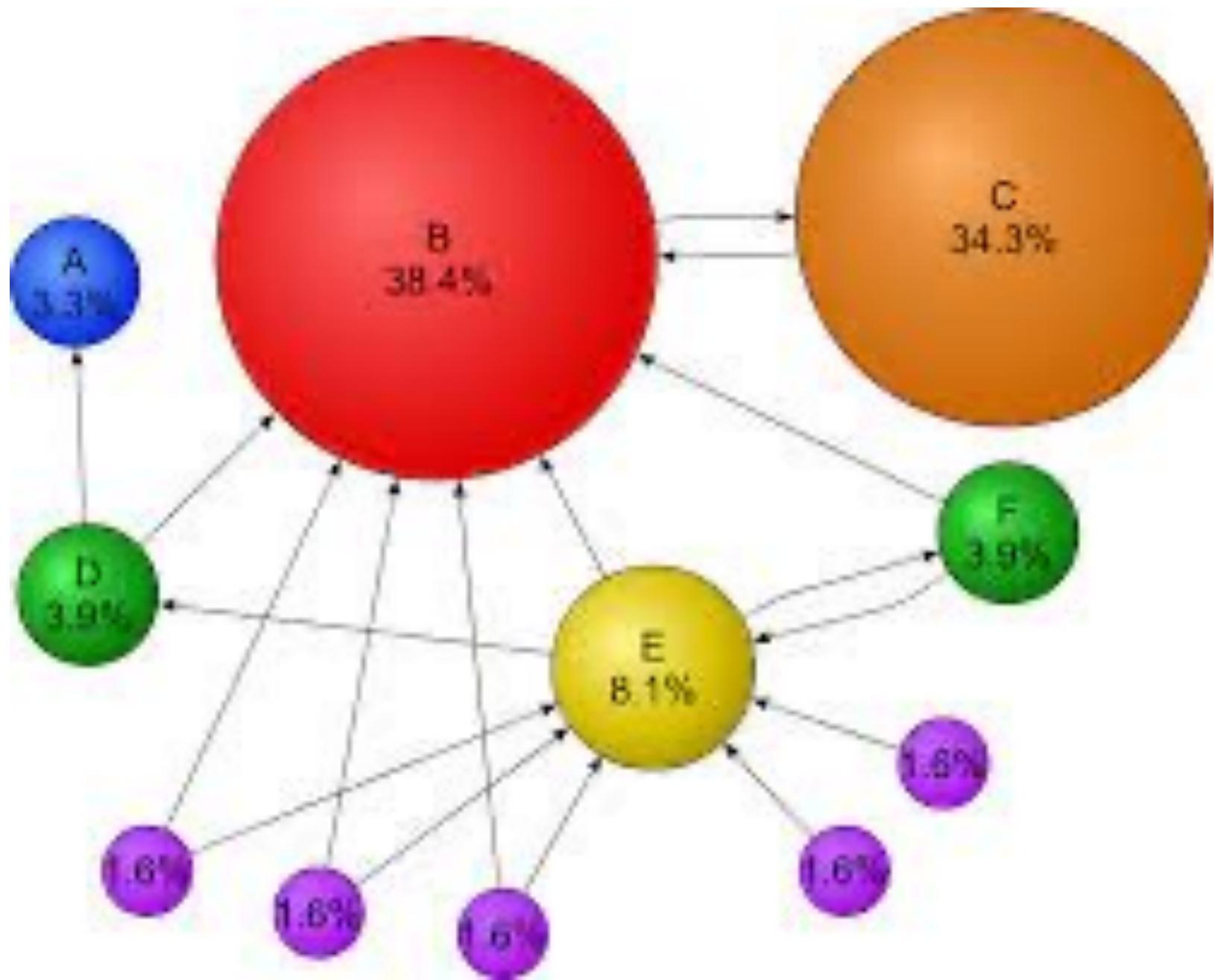


Motivation Slides for Graphs in Data Structures & Algorithms



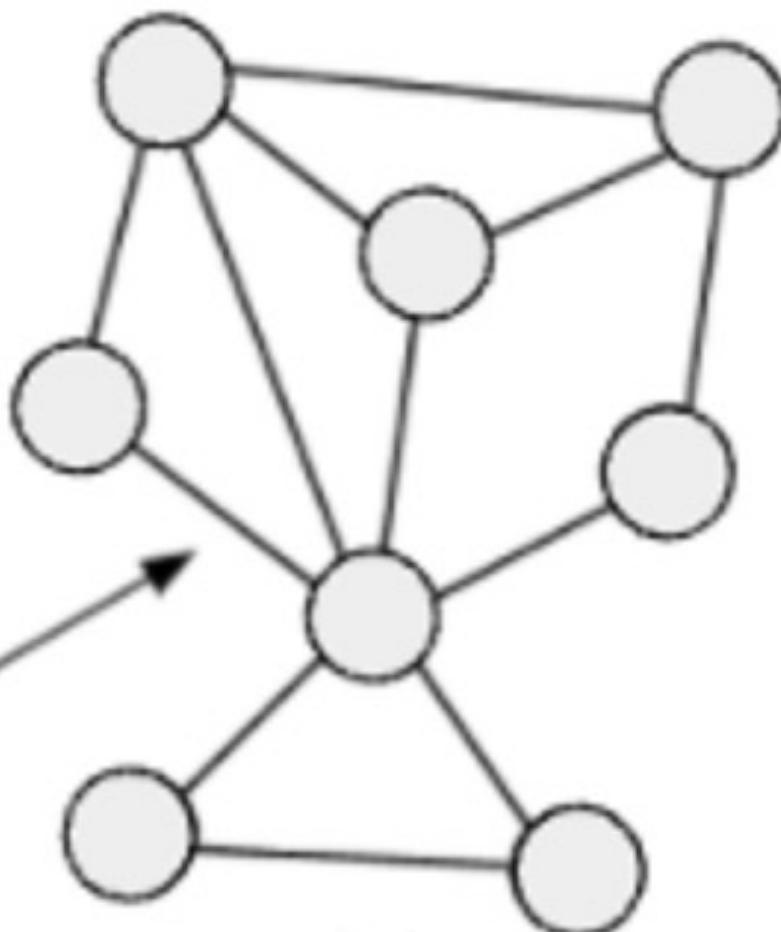




Amino
acid



Distance



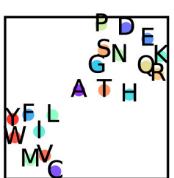
A

Sequence-function data

Variant	Score
H134L, K140R	0.22
N127A	-4.00
E176V, K180S	1.21
L191W, E195D	-0.29

Amino acid featurization

AA Index



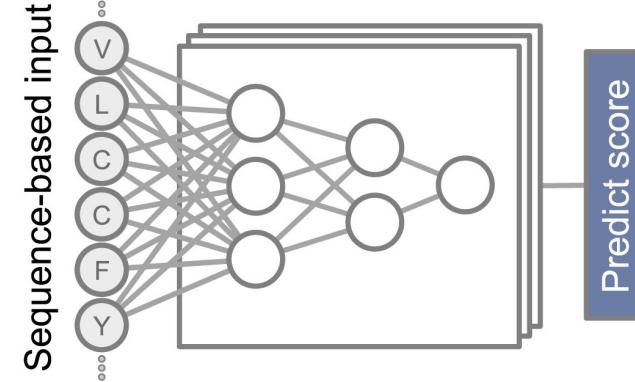
One-hot

A: [1, 0, 0, ...,]
R: [0, 1, 0, ...,]
N: [0, 0, 1, ...,]
D: [0, 0, 0, ...,]

Physicochemical & biochemical

Categorical

Neural network

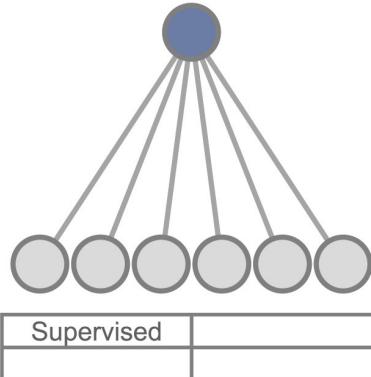


Predict scores for new variants

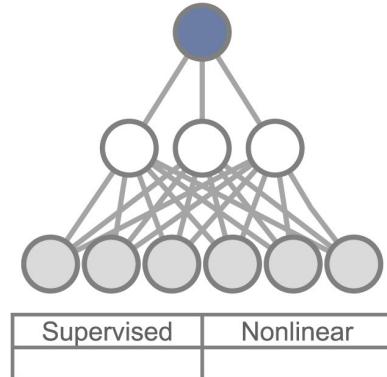
G177L, M189T	?
T159L	?
G177L, M189T	0.003
T159L	0.388

B

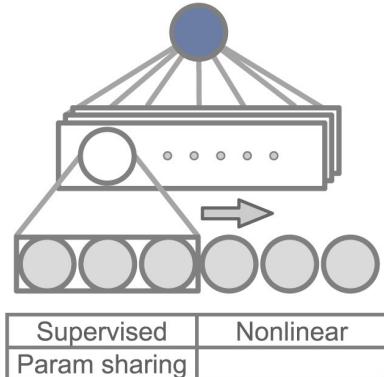
Linear regression



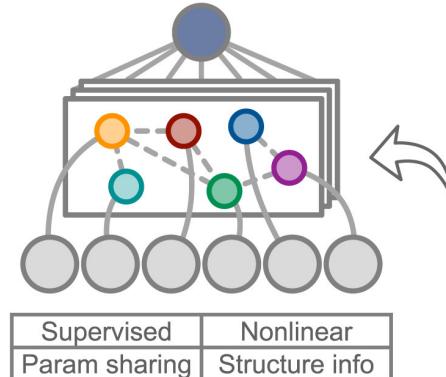
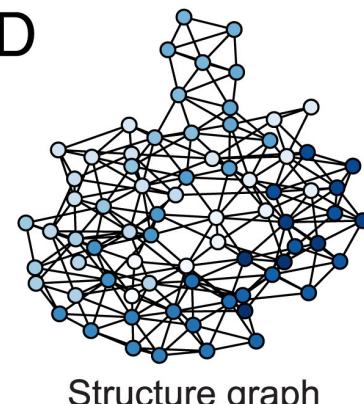
Fully connected



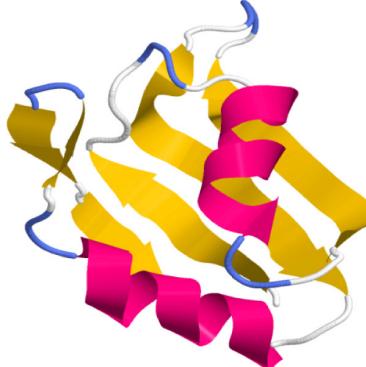
Sequence convolution



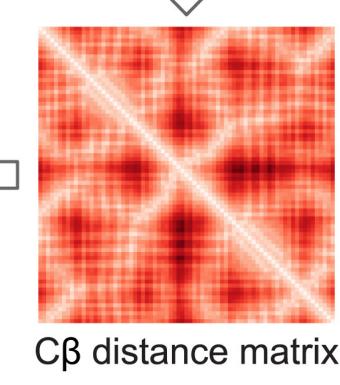
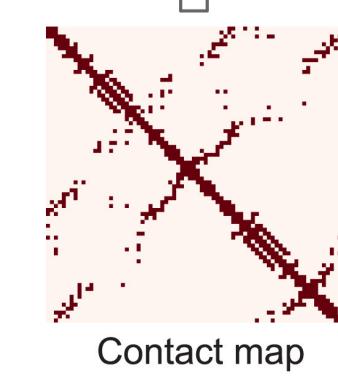
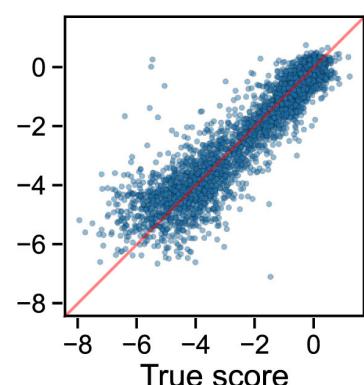
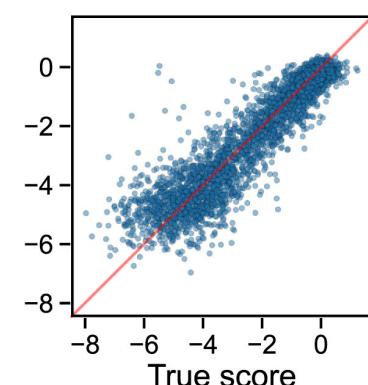
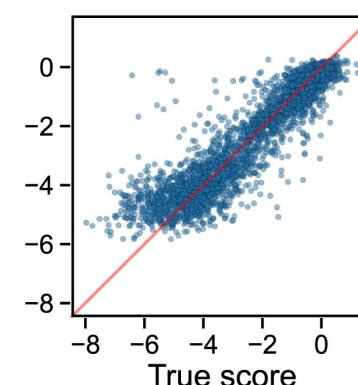
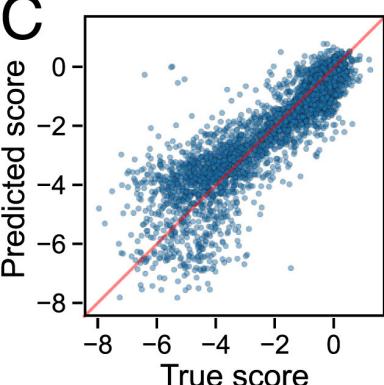
Graph convolution

**D**

Structure graph

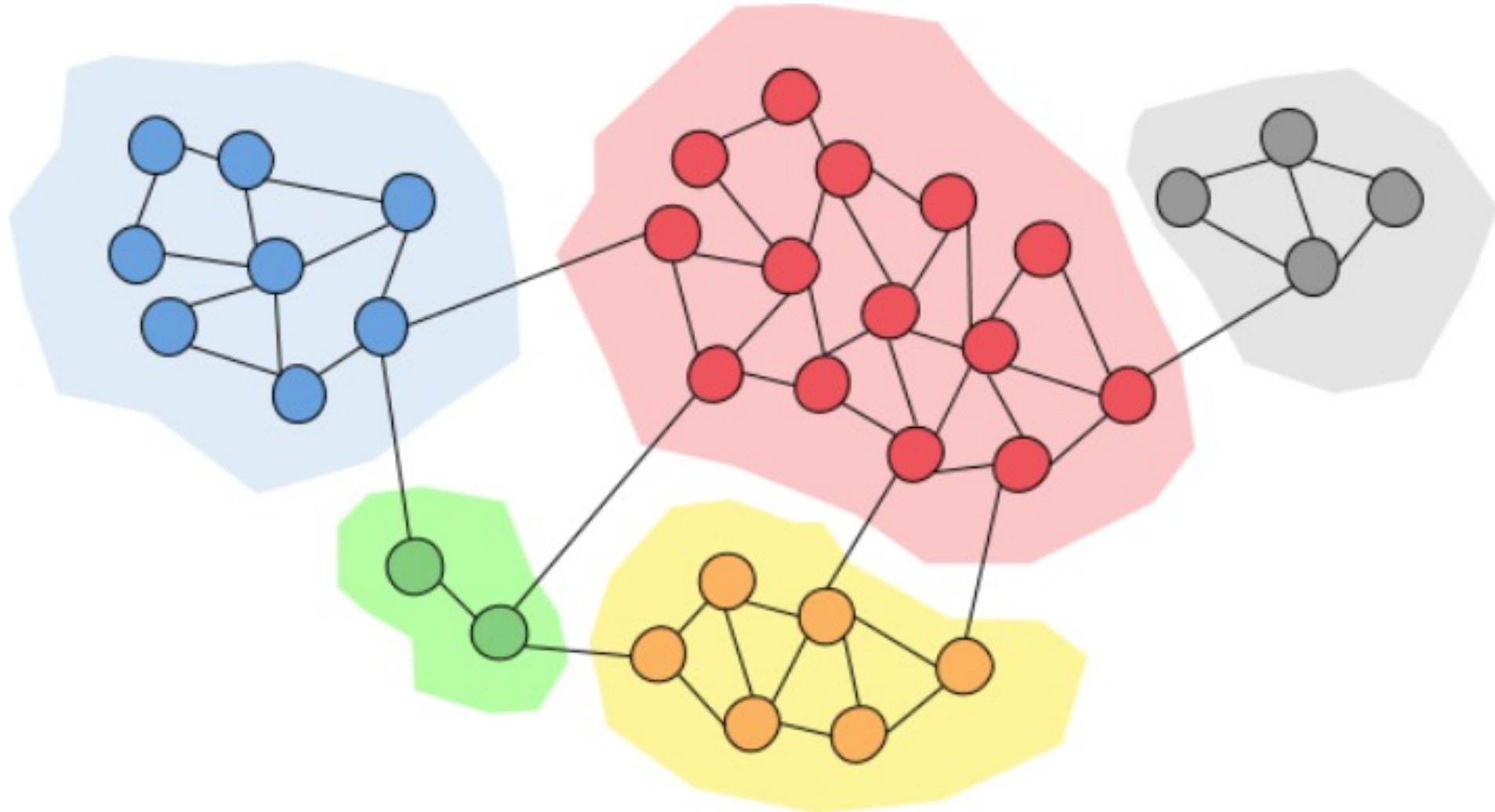


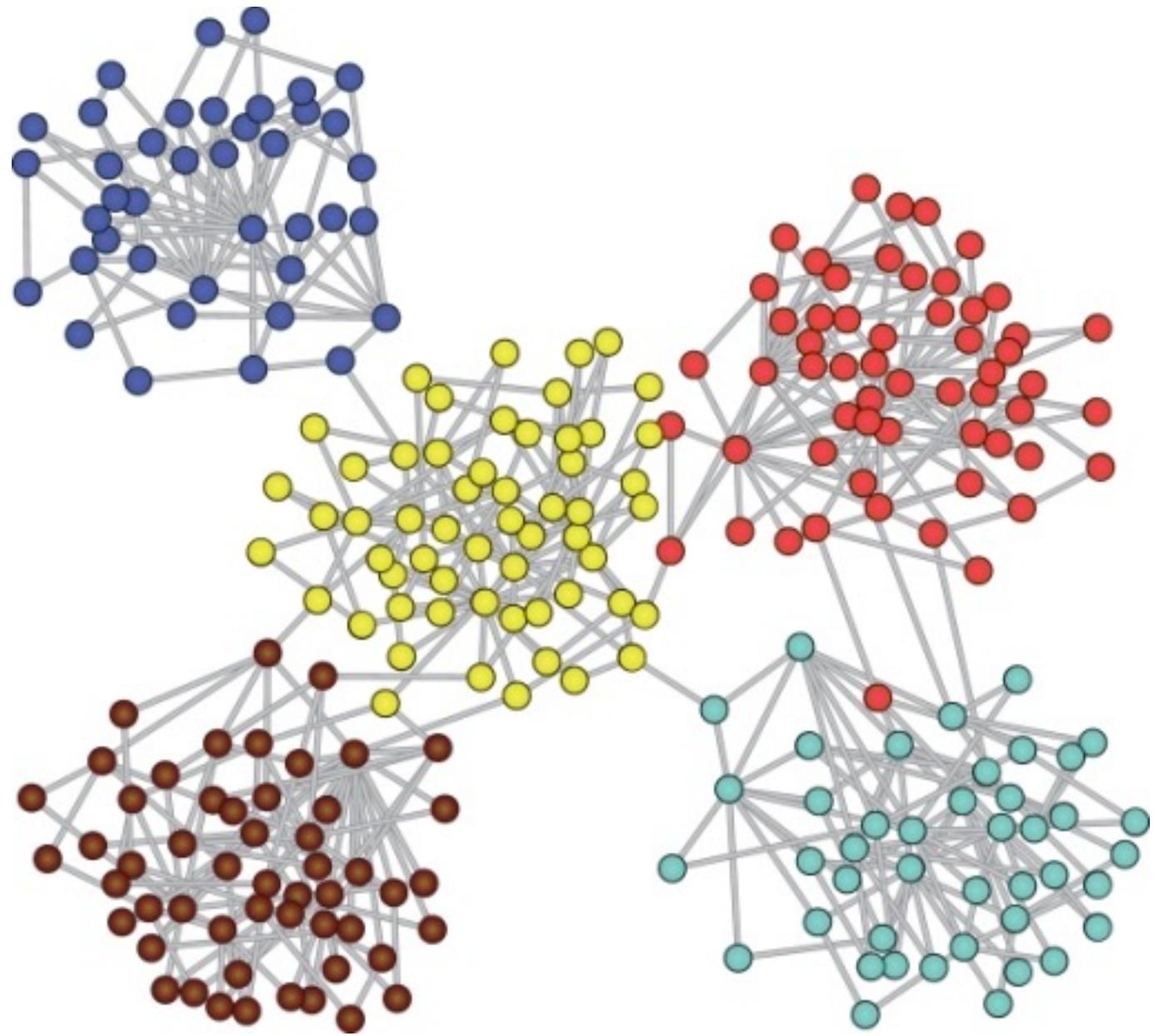
Protein structure

C

Contact map

C β distance matrix





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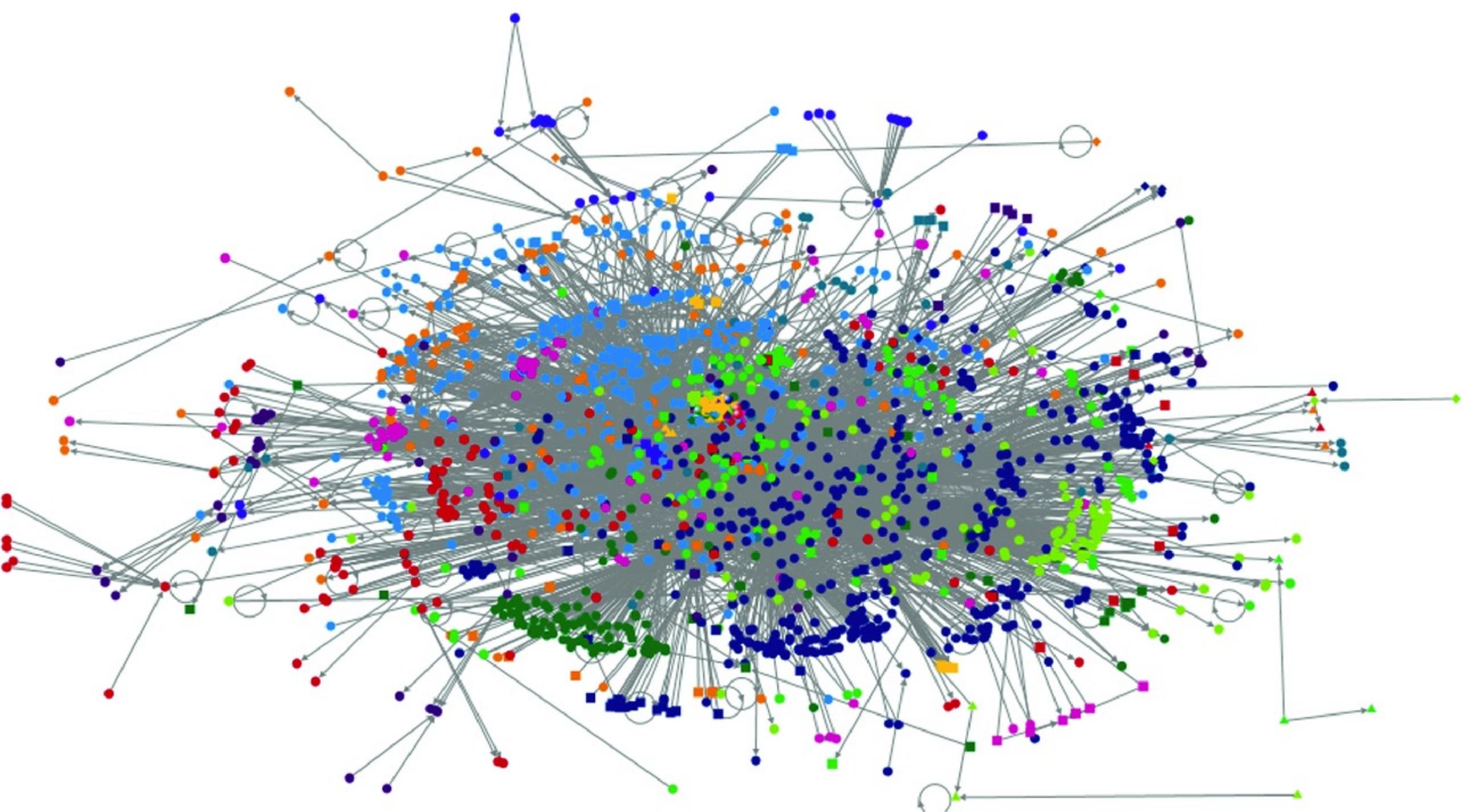
[Ilse Struweg](#) Conference paper | [First Online: 01 April 2020](#)

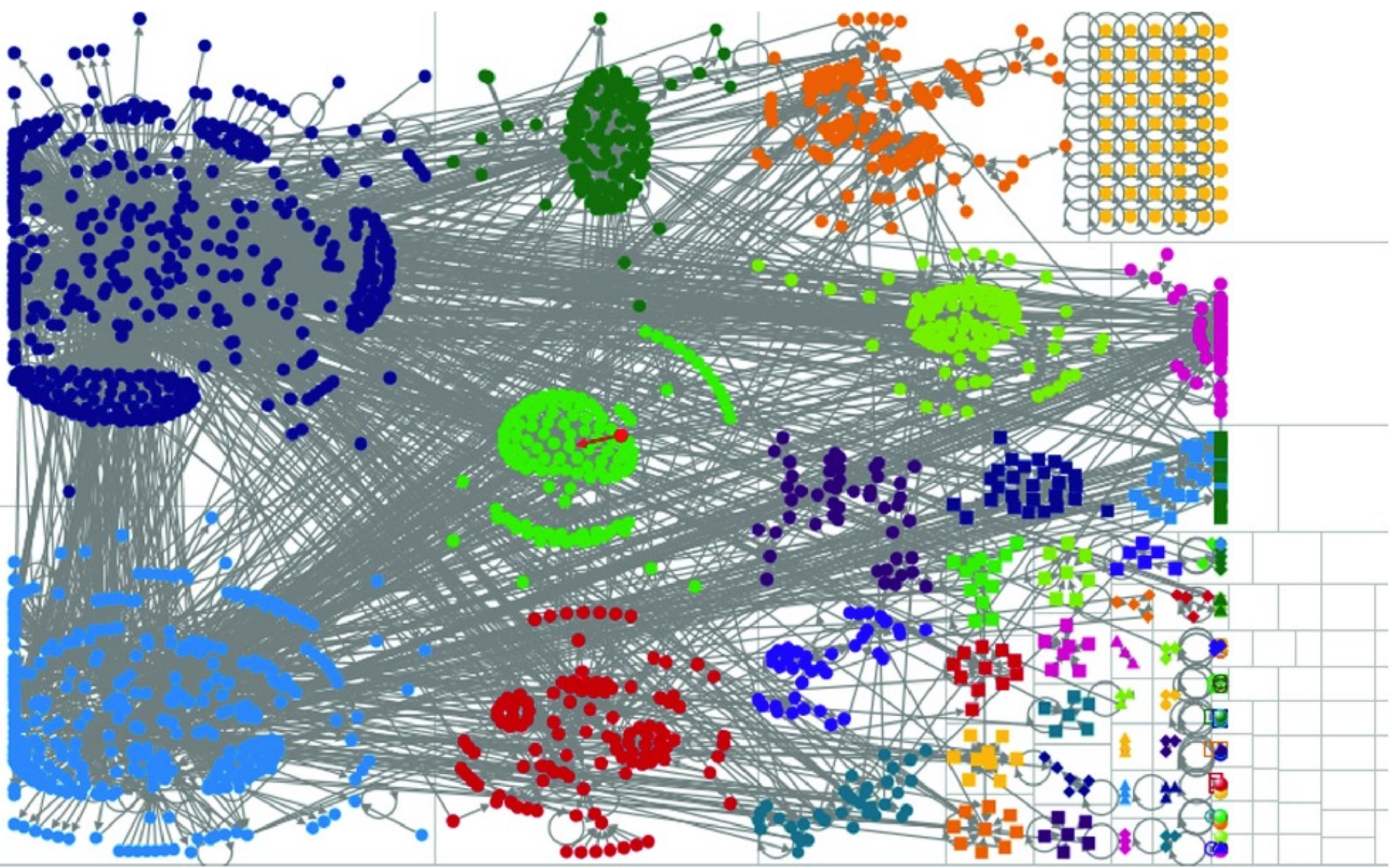
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Abstract

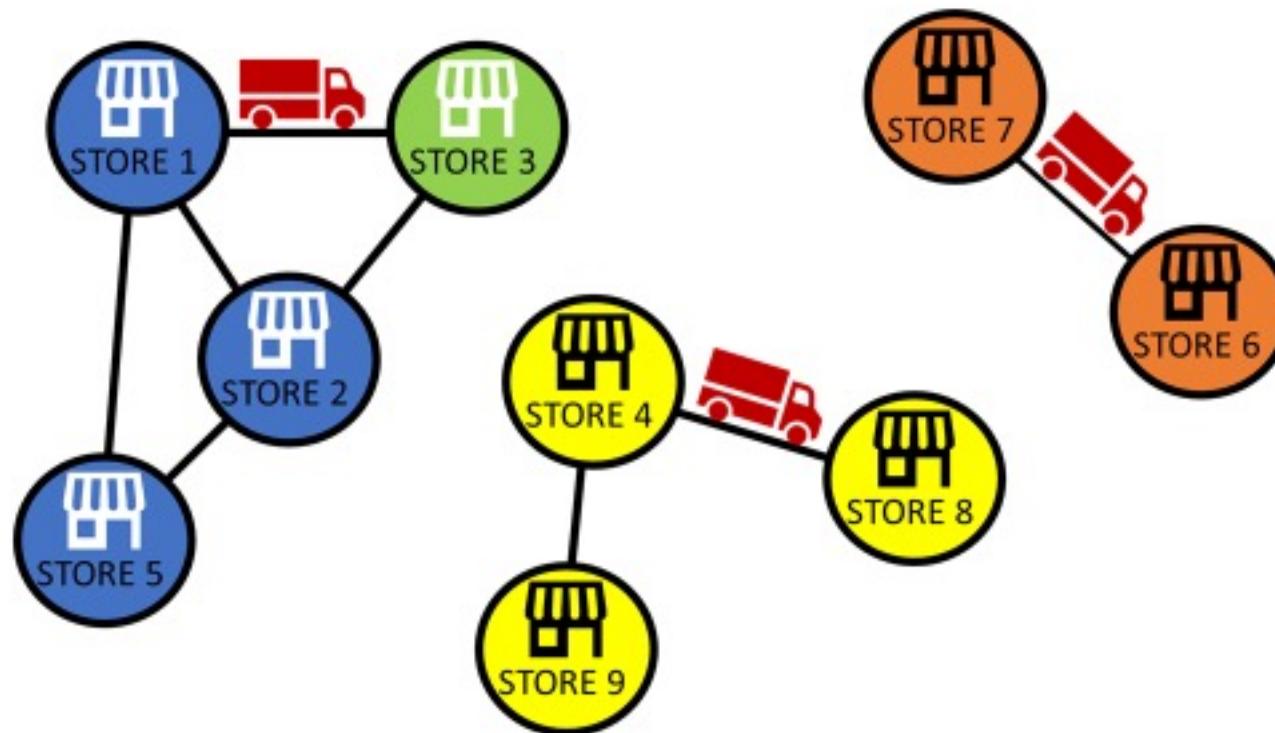
The process of extricating relationships and interchanges via visual mapping refers to

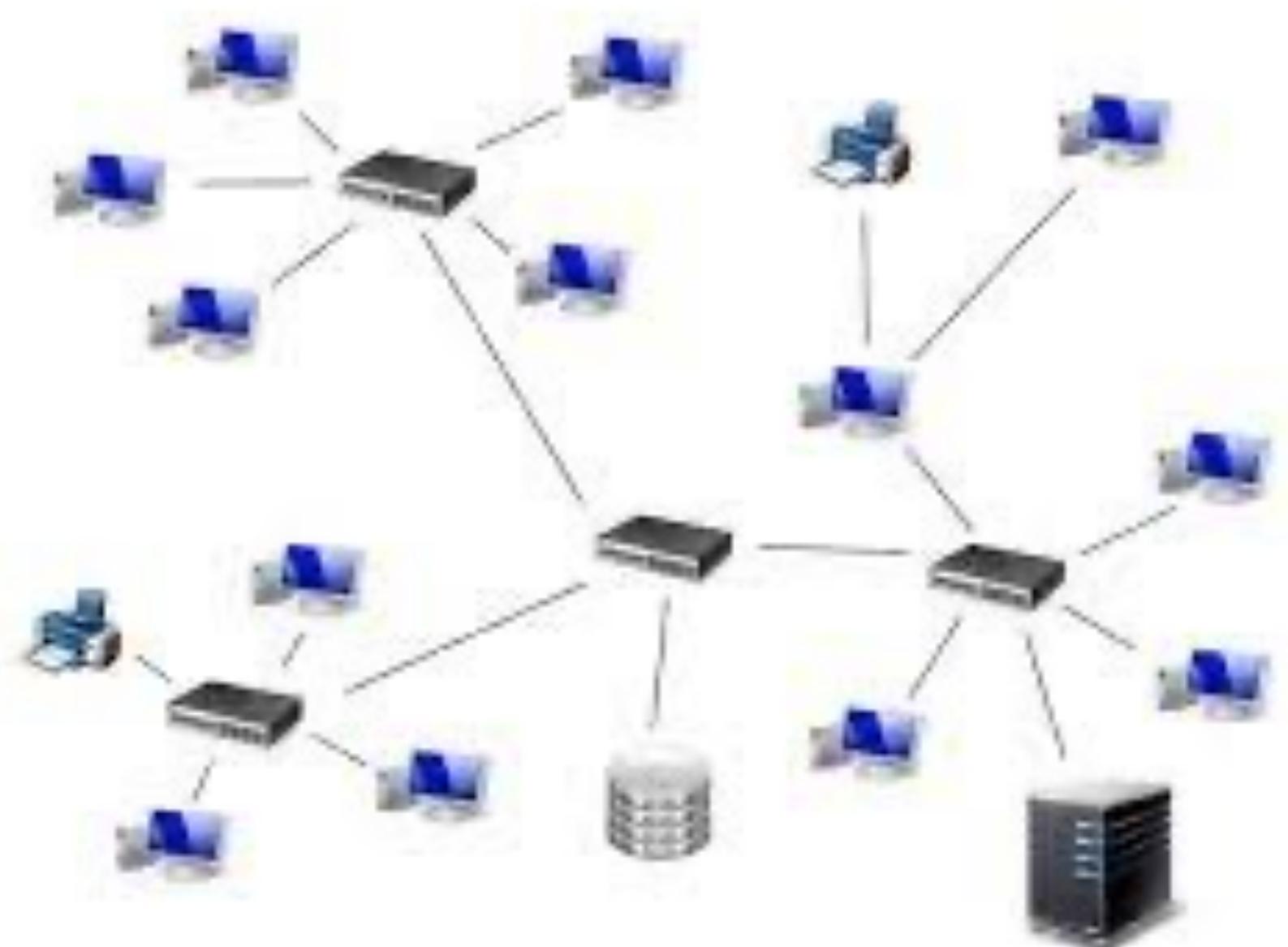




Transportation Network Analysis with Graph Theory

Use graph theory to optimize the road transportation network of a retail company





9 Games That Have Impressive AI Pathfinding

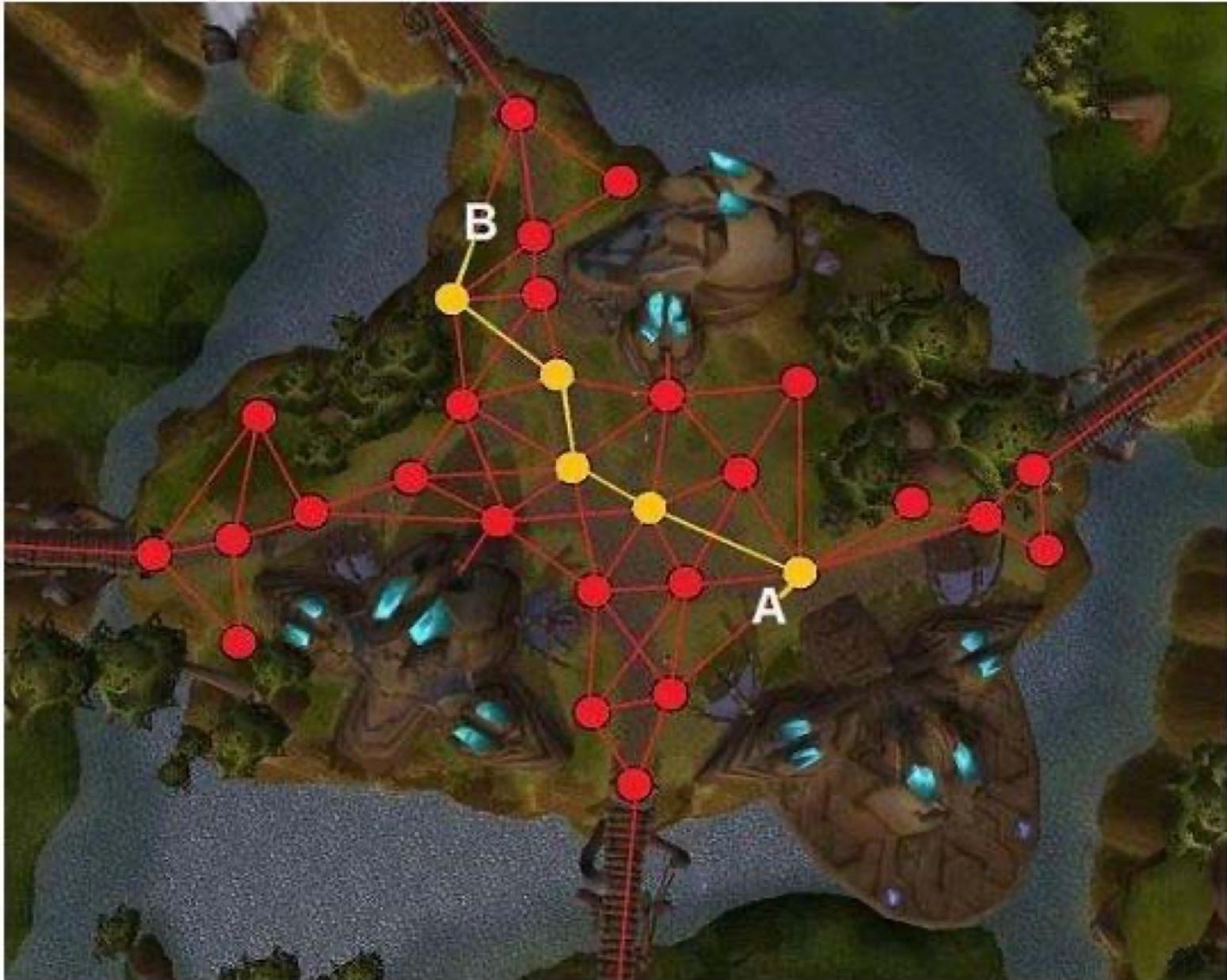
AI pathfinding is an essential aspect of many RPGs and strategy games. These titles showcase some of the best pathfinding in gaming.

BY ASHISH WALIA PUBLISHED FEB 1, 2023





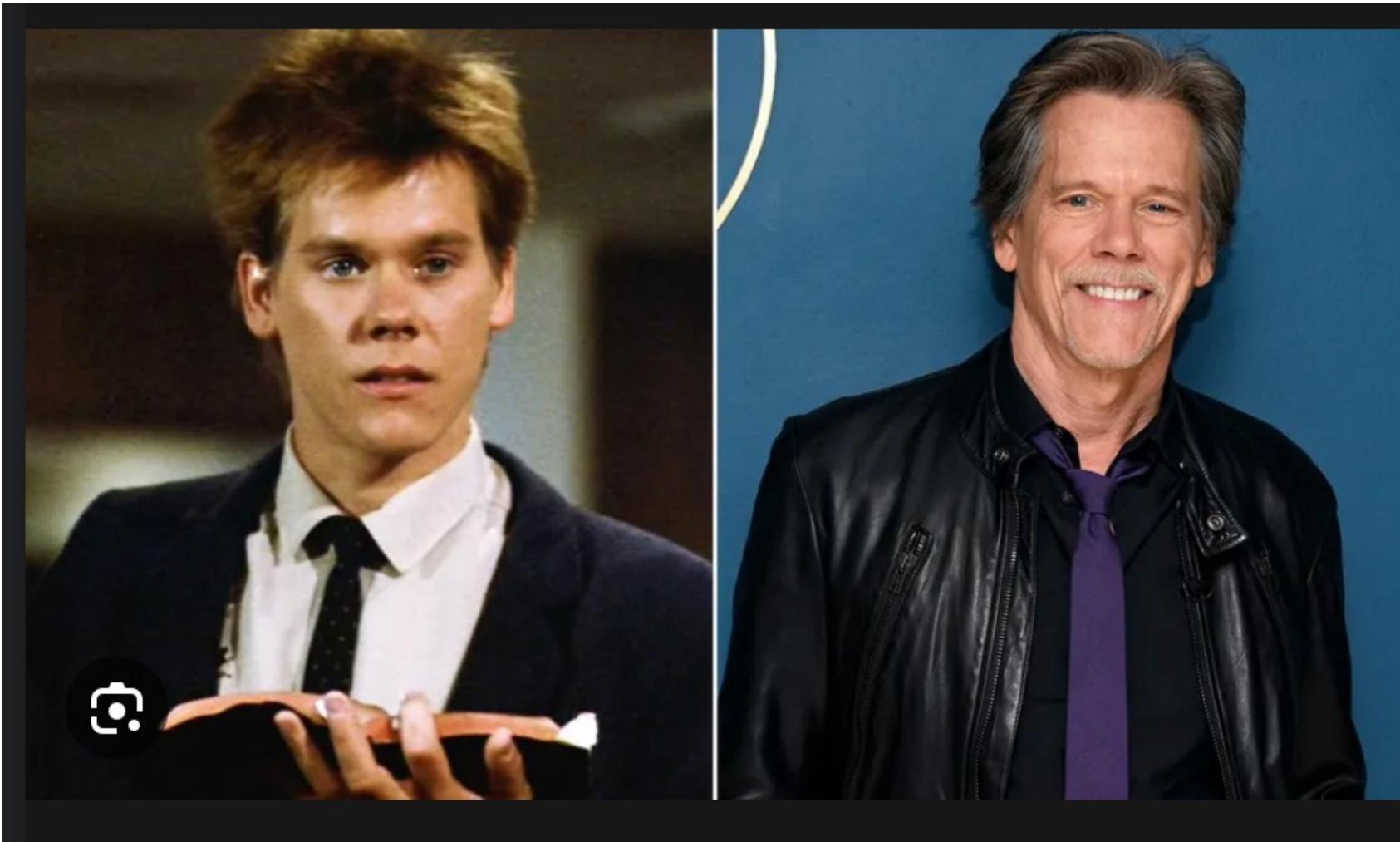
Fig. 6 A screenshot of Civilization V. [12]



(a) Navigating from A to B using waypoint graph.

A* Algorithm





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Brian Hopkins BS and BA and PhD

Pages 5-11 | Published online: 13 Aug 2007

● Cite this article <https://doi.org/10.1080/10511970408984072>

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ABSTRACT



The interconnected world of actors and movies is a familiar, rich example for graph theory. This paper gives the history of the “Kevin Bacon Game” and makes extensive use of a Web site to analyze the underlying graph. The main content is the classroom development of the weighted average to determine the best choice of “center” for the graph. The article concludes with additional student activities and some responses to the material.

Q KEYWORDS: Cinema, finite mathematics, graph theory, popular culture

six degrees of separation, weighted averages

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Kıvanç Tatlıtuğ has a Bacon number of 3.

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