

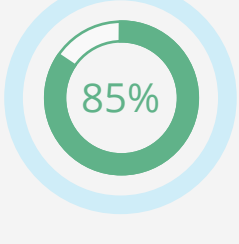
# Find More Fraud with Graph Data Science

## The Growing Problem of Fraud

Synthetic identity fraud is the fastest growing type of fraud<sup>1</sup>



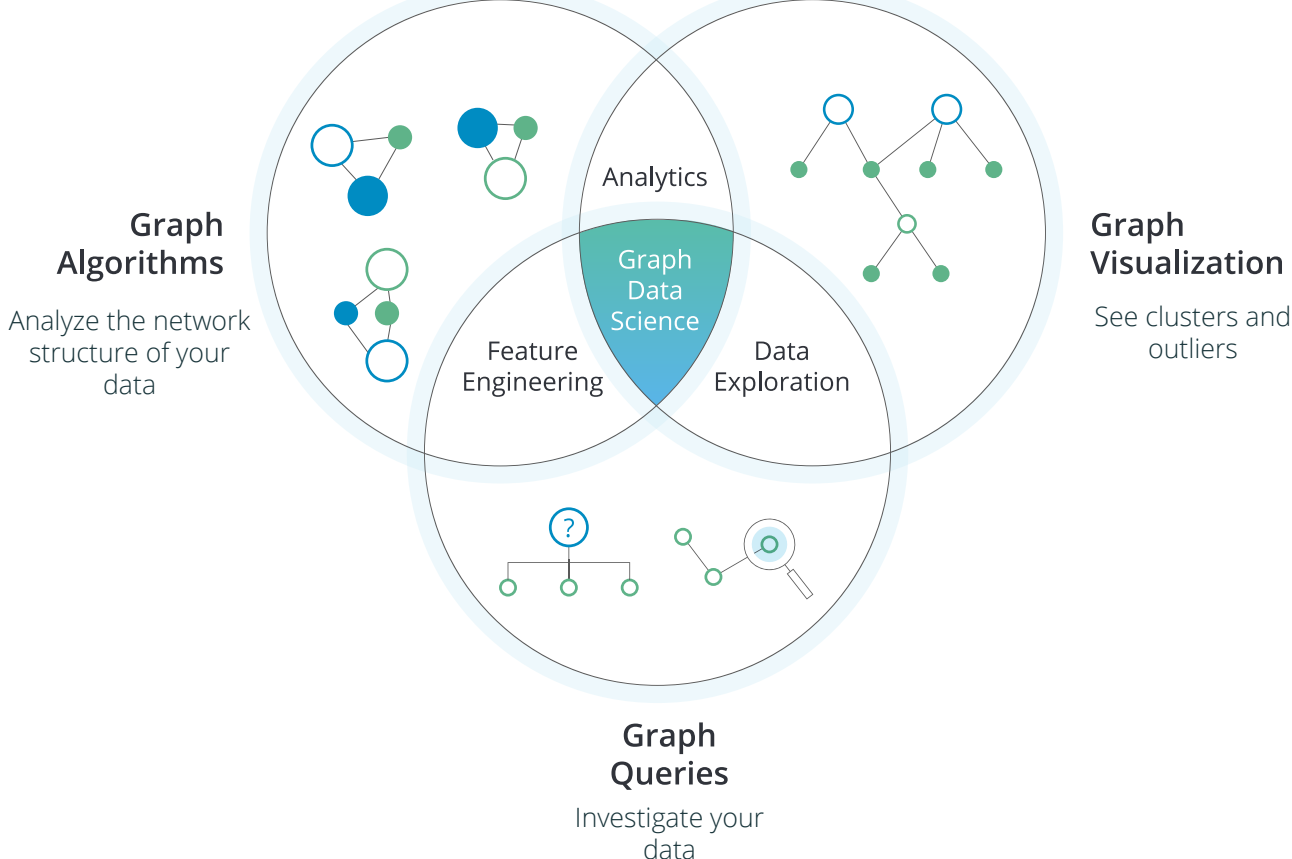
Traditional models miss 85% of synthetic identity fraud<sup>2</sup>



Financial fraud cost \$5 trillion in 2019<sup>3</sup>



## Graph Data Science Unleashes the Power of Your Data

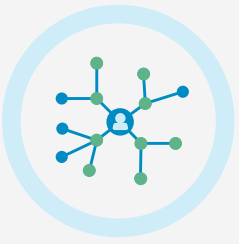


## Graph Algorithms Learn from Your Data's Network Structure



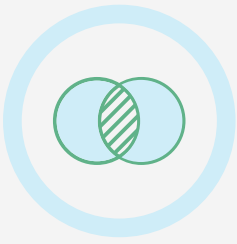
### Community Detection

Identify disjointed groups that share identifiers



### Centrality (Importance)

Measure influence and transaction volumes



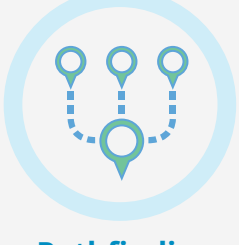
### Similarity

Measure account similarity or fraud ring similarity



### Heuristic Link Prediction

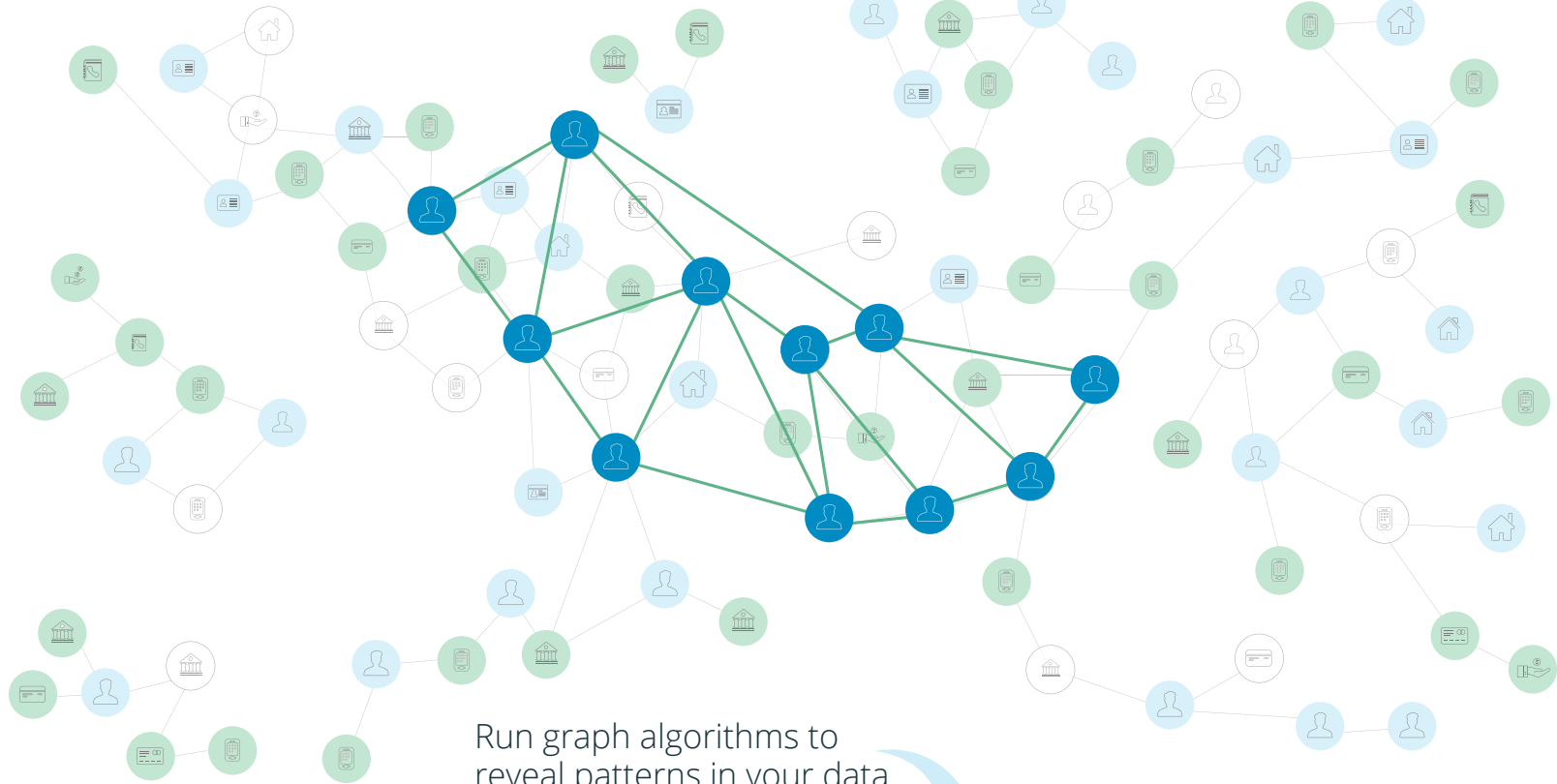
Find unobserved relationships and add them to your data



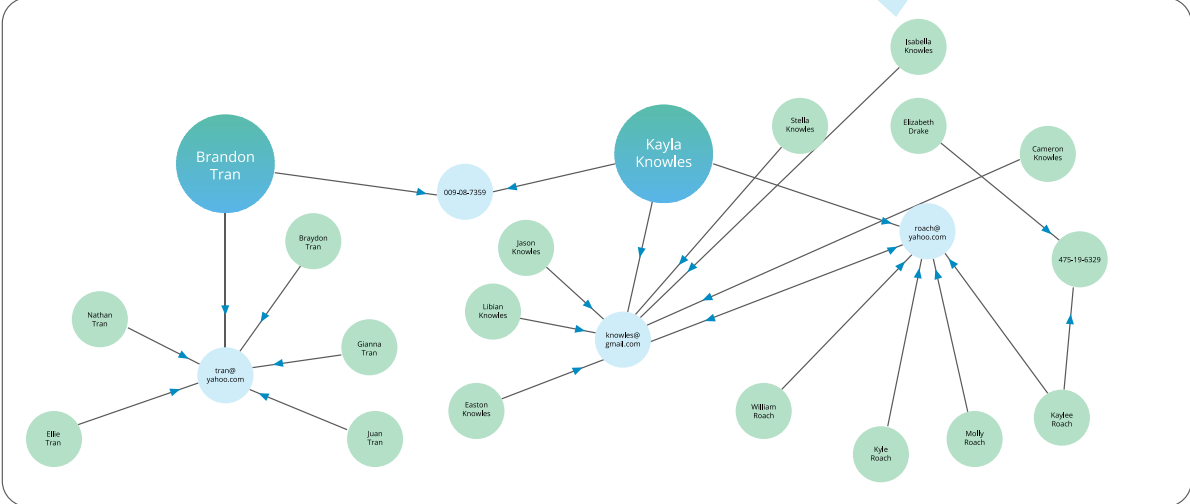
### Pathfinding and Search

Filter transactions with extremely short paths between people

## Improve Fraud Detection with Graph Data Science

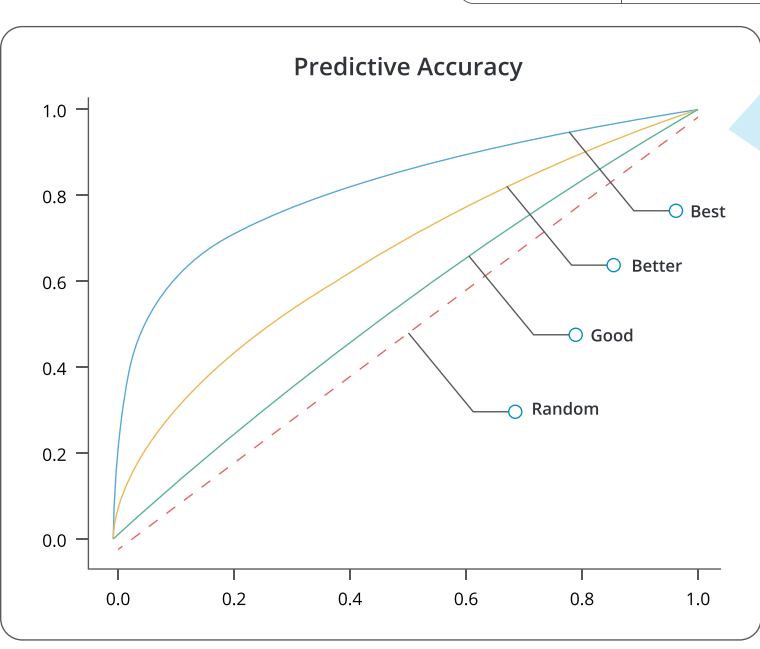


Run graph algorithms to reveal patterns in your data



Extract graph features from your data

Client	Betweenness Centrality	Unique Shared Identifiers	Weighted Score	Known Fraudster?
Jacob Olam	0	1	1	No
Kaylee Roach	32	2	4	Yes
Mackenzie Burns	0	0	0	No
Kayla Knowles	192	3	4	Yes
Nicholas Jones	0	1	2	No
John Smith	0.08	2	10	Yes



Train your machine learning models using graph features

Achieve greater predictive accuracy from existing data

## Business Results



Gain predictive accuracy



Find emerging fraud



Increase recovery rates

## Learn more about the Neo4j Graph Data Science Library

READ THE WHITEPAPER

