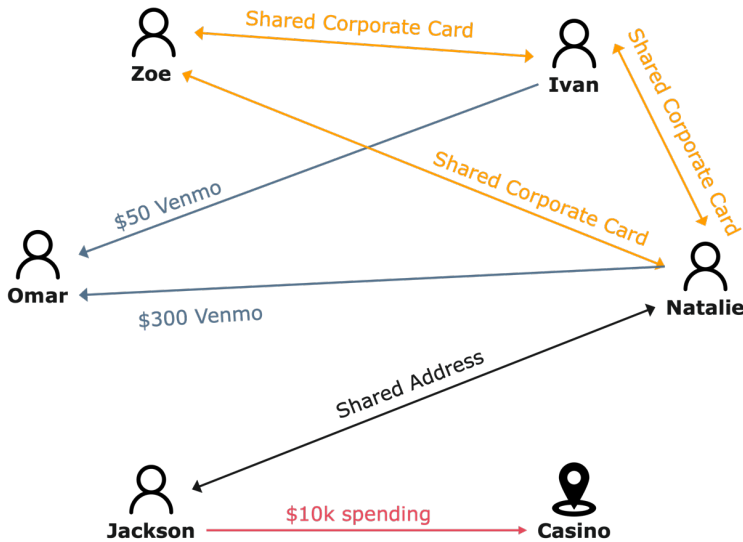# Fraud Association Network

A bank enlisted 2OS to enhance their fraud capabilities. 2OS designed a prototype association network by creating features that indicate customer linkage. This association network has multiple use cases in the fraud space, such as uncovering fraud schemes, scam detection and customer relational influence prediction. It also has applications in other areas of the business such as marketing.

What is Association Network

Insights

Immediate insights:
1. Zoe, Ivan and Natalie work at the same company
2. Omar might be a common friend of Ivan and Natalie
3. Natalie and Jackson might live together

Inferred relationships:
1. Transactions between Zoe, Ivan and Natalie are likely benign
2. Natalie might start gambling under the influence of Jackson

Outputs

✓ A set of fact–based features indicating historical interactions

✓ A set of derived features suggesting the potential strength of the relationship

✓ A prototype association network of the customer base

Fraud Use Cases

Reduce False Positives

Estimated to reduce false positives for scam detection by up to **30%**, as transaction between two linked accounts are likely benign

Predict Linkage Influence

Monitor customers with high vulnerability to risky influence such as gambling and novel investments

Uncover Fraud Scheme

Identify accounts linked to known fraud accounts engaging in suspicious activities, as they may be part of a coordinated fraud scheme

*Note: Graph is illustrative