GRAPH+AI SUMMIT

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Knowledge Graph and NLP revolutionize the way AML looks at PEPs!
An entity resolution case study

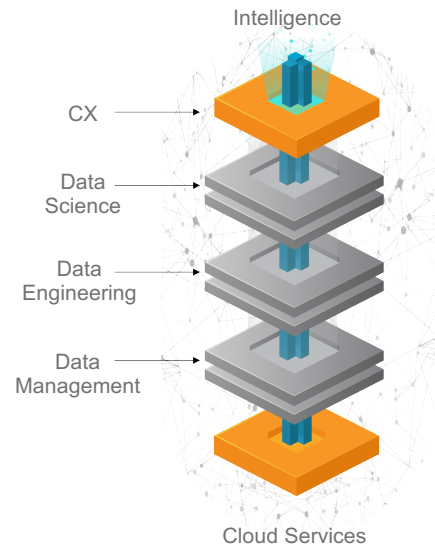April 21, 2021 12:00 EST

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MASTECH infoTrellis

Quick Intro

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VP & GM Data Science

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MASTECH
infoTrellis

We architect
Enterprise Intelligence Hubs,
powered by
knowledge graph and AI,
to enable
agile innovations
and quickest paths to value.

Intelligence

CX

Data
Science

Data
Engineering

Data
Management

Cloud Services

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The elusive "entity" in today's Entity Resolution

❑ No longer *just* about Names and Addresses

❑ Context, context… and more context.

❑ Digital twins – integrating who we are

… at home,

… at work,

… what we think and do,

… how we do things

… and why,

… 24/7.

How wide the definition aperture depends on who's asking.

In AML, entity resolution traditionally belonged in KYC, where the subject's identity is verified and bumped against PEP and SAR lists

… when, in fact, most of AML investigative work is all about defining who the entity is:

- ❑ Transaction Profiling and Monitoring
- ❑ Communications
- ❑ Relationships
- ❑ Affiliations
- ❑ Travel

With communication's digital revolution, there are yottabytes of signals of financial malfeasance that go undetected

They potentially provide the missing link between entities, surfacing a bigger resolution of an entity's signature for suspicious activity.

AML Vault: Knowledge graph-supported AI accelerators for digital transformation of the AML investigation process

BigPEP.ai

Entity.ai

Smart Investigator Assistant
False Positives
Adjudication
Automation
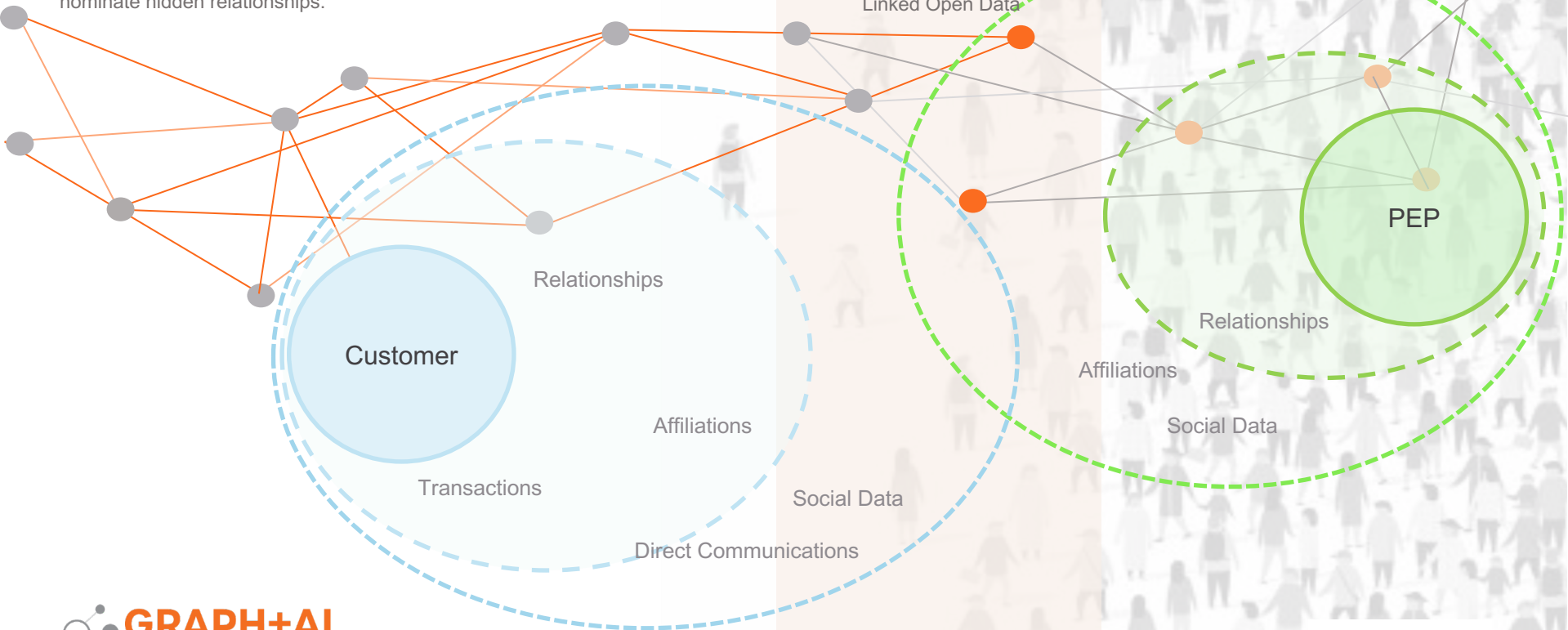
Data Governance KYC

Hawk.ai
Transaction Monitoring

BigPEP.ai

Knowledge Graph facilitates the linkage mining, while deep learning (many via NLP) builds out agile connectors to nominate hidden relationships.

Proprietary
Entity Enrichment
Technology

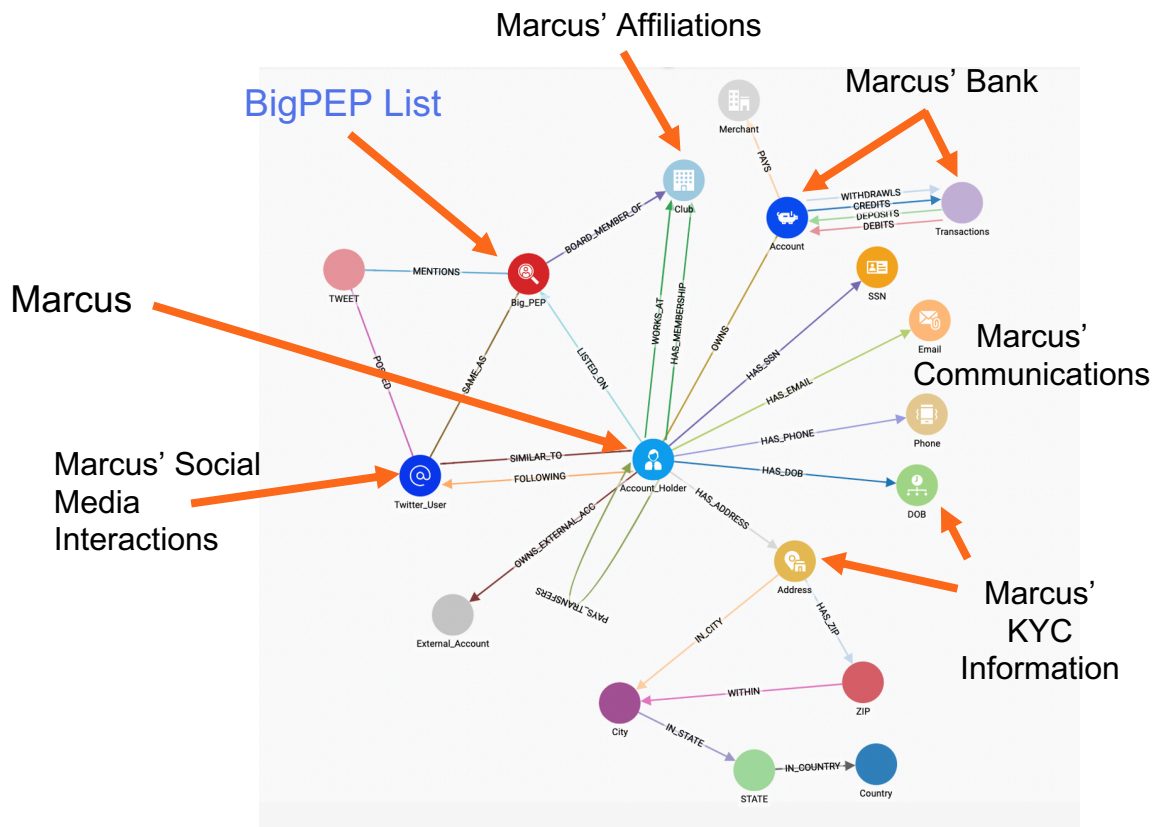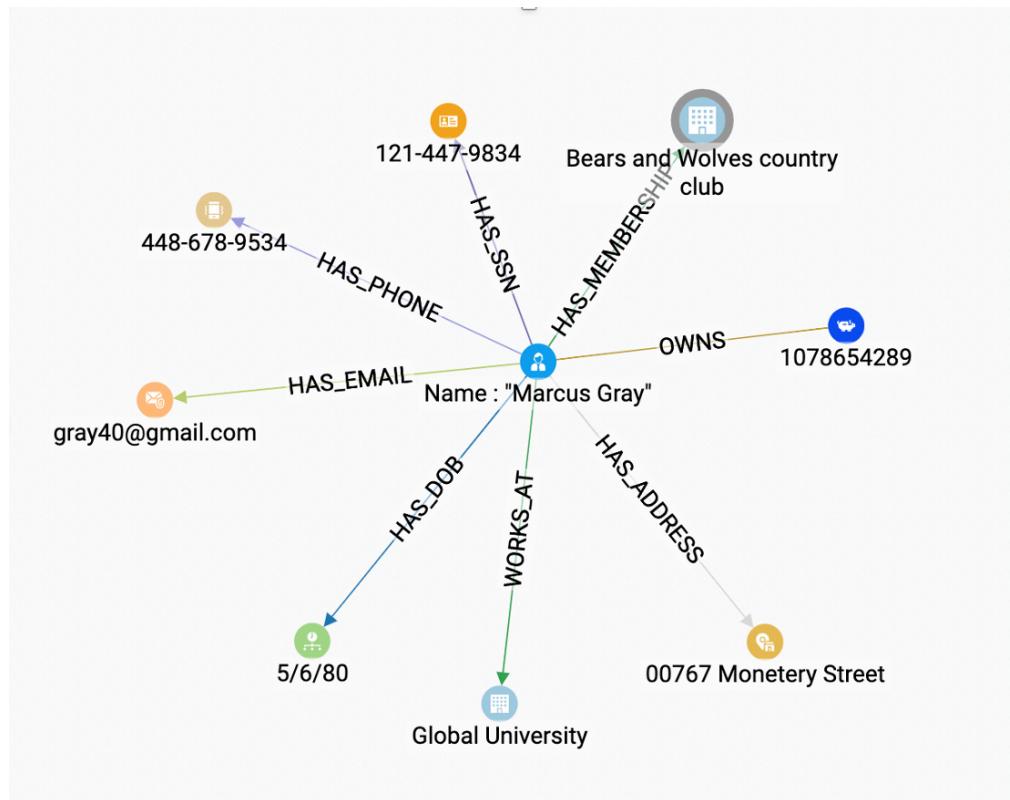Adverse Media Screening via NLP, using Linked Open Data

Relationships

Customer

Affiliations

Transactions

Social Data

Direct Communications

Relationships

Affiliations

Social Data

PEP

Example

Case study:

Leveraging BigPEP.ai to find hidden relationships of Marcus, a bank customer whose transactions looked clean otherwise
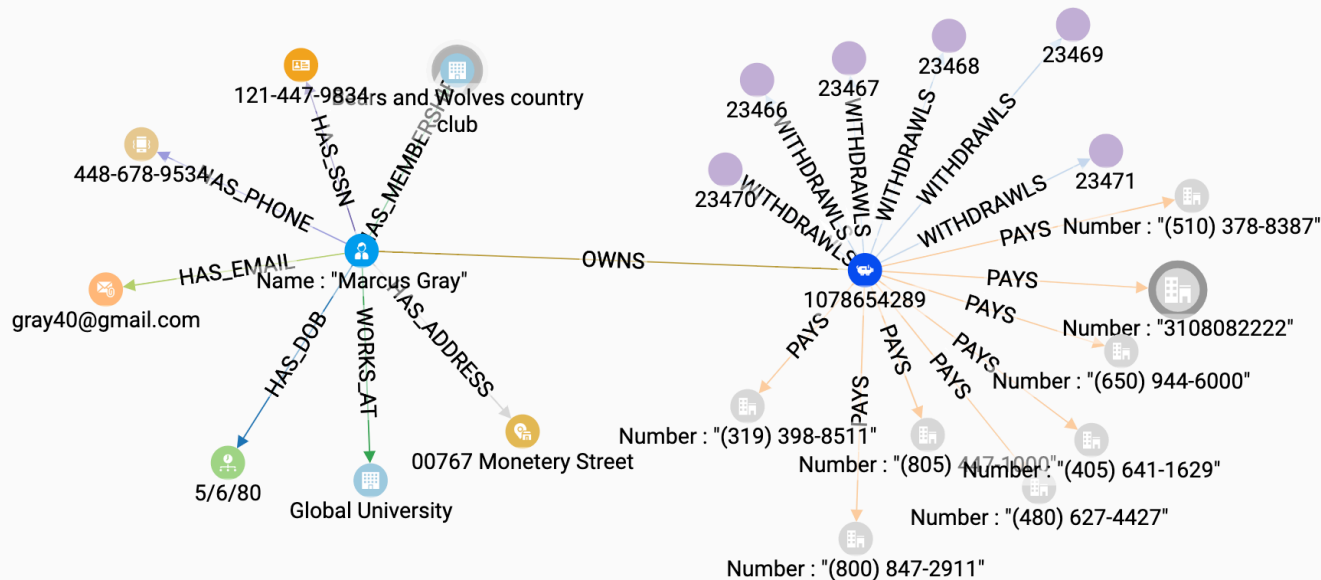
Ontology Design

Marcus, the bank's client
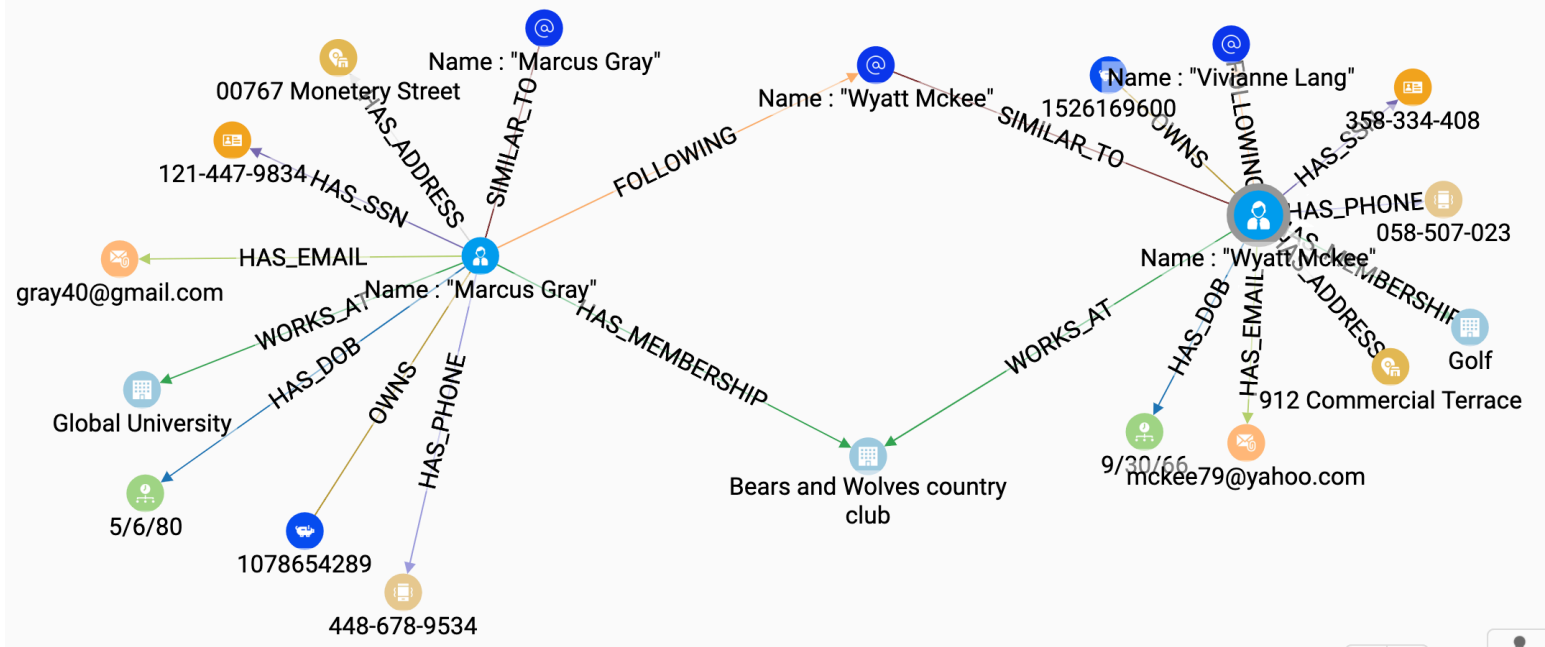

… Looks complete from a standard KYC lens.

Marcus' (clean) Transactions
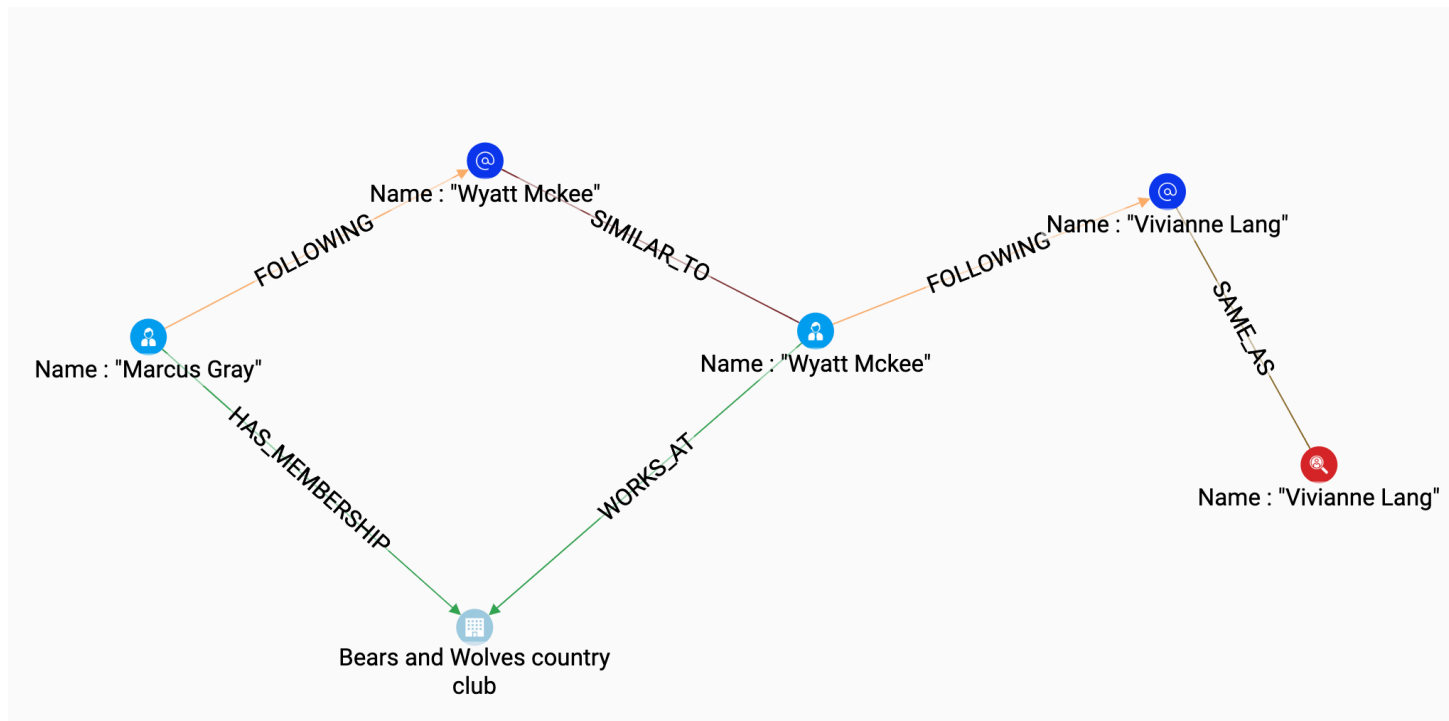
… No alarm set off by clean transactions, as well.
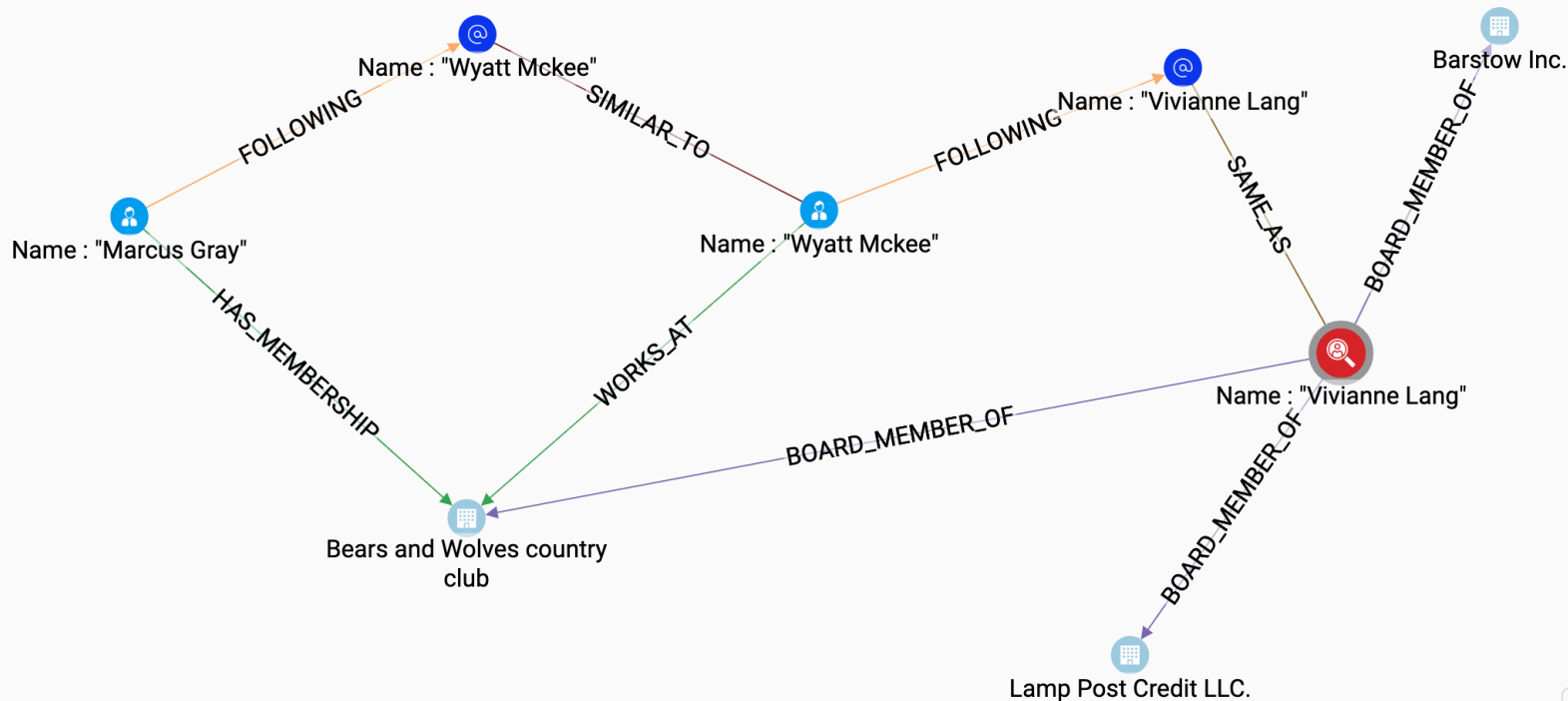
Marcus' friend, Wyatt

… BigPEP.ai finds a key link to PEP list.
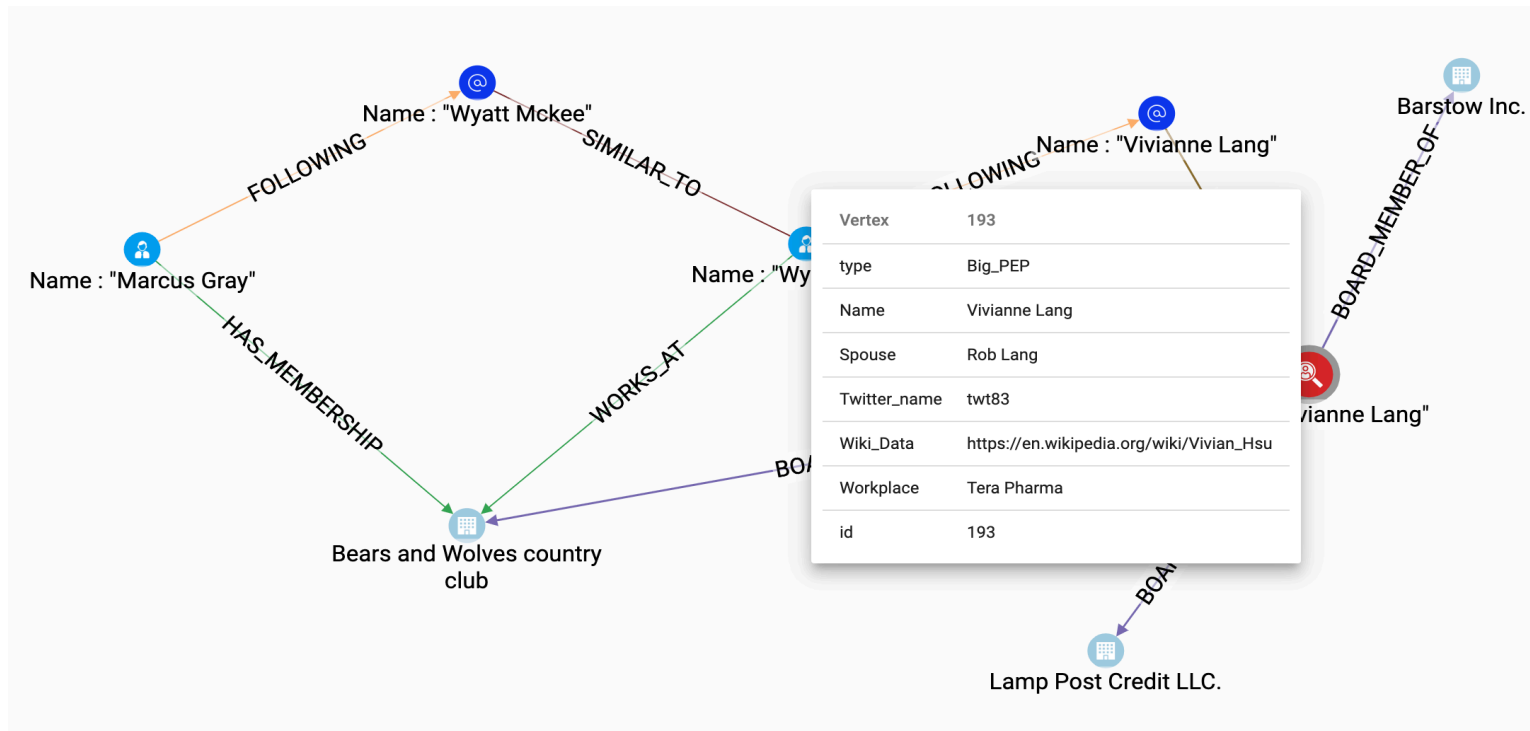
Marcus' friend, Wyatt

BigPEP.ai links Marcus to Vivianne Lang

Why did BigPEP.ai highlight the link to Vivianne?
She's a congressman's wife

Confidence Codes on the meaningfulness of relationships found

▶
- Relationships are scored
- Rank ordered
- Self-adjusted confidence threshold

Summary

With BigPEP.ai, finding convoluted suspicious activities that link a banking customer to PEP can finally take a day, not months.

It's the decoder lens on what KYC and transaction monitoring would otherwise miss.

- BigPEP.ai can widen the search for linkages, thanks to knowledge graph

- AML Vault contains AI accelerators that facilitate deep learning in:
  - Sentiment Analysis
  - Geotagging
  - Adjudication
  - Entity Resolution
  - Link Analytics
  - Content Tagging
  - Regulatory Compliance Report Generation and Automation

thank you.

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