

Data and Analytics Innovation Day

Project Wolf Trap

*"The problem is not that we don't have enough data – it's that we have too much data and we need to make sense of it."*¹

Wolf Trap provides a robust and scalable network analysis tool for financial regulators to discover and visualize previously unknown connections and patterns across a wide variety of data sources

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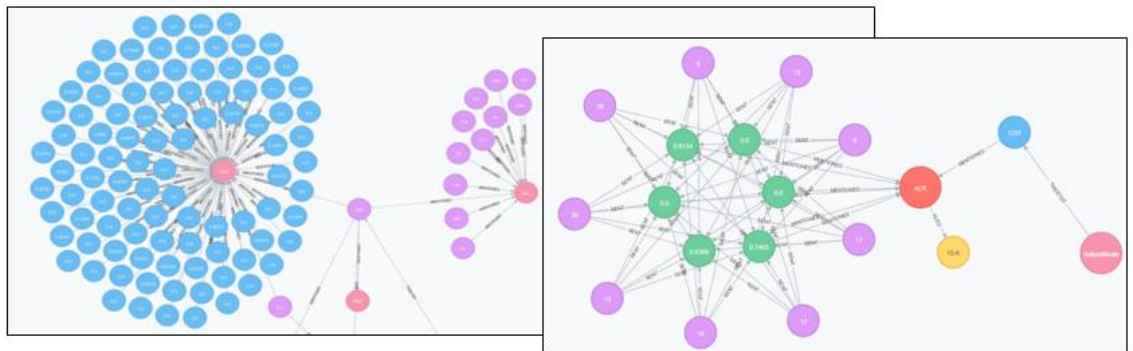
¹ Erik Brynjolfsson, Director of the MIT Initiative on the Digital Economy

Challenges for Today's Financial Regulators

Financial regulators face an exponential growth in data from increasingly complex financial institutions and markets. When, for example, trying to detect pump and dump schemes, one of the most time consuming aspects of these tasks involves sifting through multiple channels of data, such as social media platforms, stock and options exchanges, in addition to data which may not be easily accessible. The time required to discover and follow up on leads within (and across) these data sources is prohibitive to the investigative process, and ultimately results in fewer insights and workable cases.

Our Solution

Booz Allen's Next Gen Analytics team has extensive experience in creating a cohesive order out of originally seemingly incoherent data. An exemplification of this is the prototype capability – Project Wolf Trap – combining flexible and scalable data collection with advanced analytics to identify relationships between individuals and companies across disparate structured or unstructured data sources. Wolf Trap then pushes this information through directed graphs, giving investigators and examiners a powerful, yet visually intuitive tool to analyze those relationships for potentially suspicious interactions or schemes.



Data Sources

Wolf Trap ingests data from 4 publicly-available data sources:

Promoter emails
Newsletter emails collected from stock promoters

Twitter
Tweet mentions of companies in our target population

SEC Filings
10-K corporate filings of publicly traded companies

Yahoo Finance
Daily stock trading data for companies

Natural Language and Graph Interface

Wolf Trap uses Natural Language Processing to extract people and organizations embedded in unstructured data such as emails / documents, correlating those entities across data sources to identify relationships across data points. These relationships are then stored in Neo4j, an industry-leading, open source graph database, to enable faster and more intuitive analysis of seemingly disparate, yet possibly connected data sets.