Piercing the veil of the corporate landlord

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Presentation Overview

- Project context, description and organization
- Requirements for the MVP
- System architecture
- Minimum Viable Product - Demo
- Graph Modelling - Demo
- Way Forward

Project Context

- Sponsor

  The Research Department in the Office of the New York State Attorney General

- Background:

  The OAG serves all New Yorkers in numerous legal and regulatory arenas, one of which is combatting harmful landlord practices (tenant harassment, deed theft, bank fraud, etc).

- Objective:

  Provide additional technical means to support attorneys in cases that involve tenant harassment or fraud.

Problem Description

- The issue:

  Identifying an owner's full portfolio is difficult

  Limited Liability Companies (LLCs) allow landlords to shield their identity and reduce their financial risk, and along with that, the visibility of their entire portfolio.

  The tenant harassment could happen to rent-stabilized property which could get financial appreciation once the landlord finish the eviction

- Proposed Solution:

  Use NYC's open data to develop a data exploration tool that helps pierce the corporate veil and supports the work our client does to combat harmful landlord practices throughout New York City.

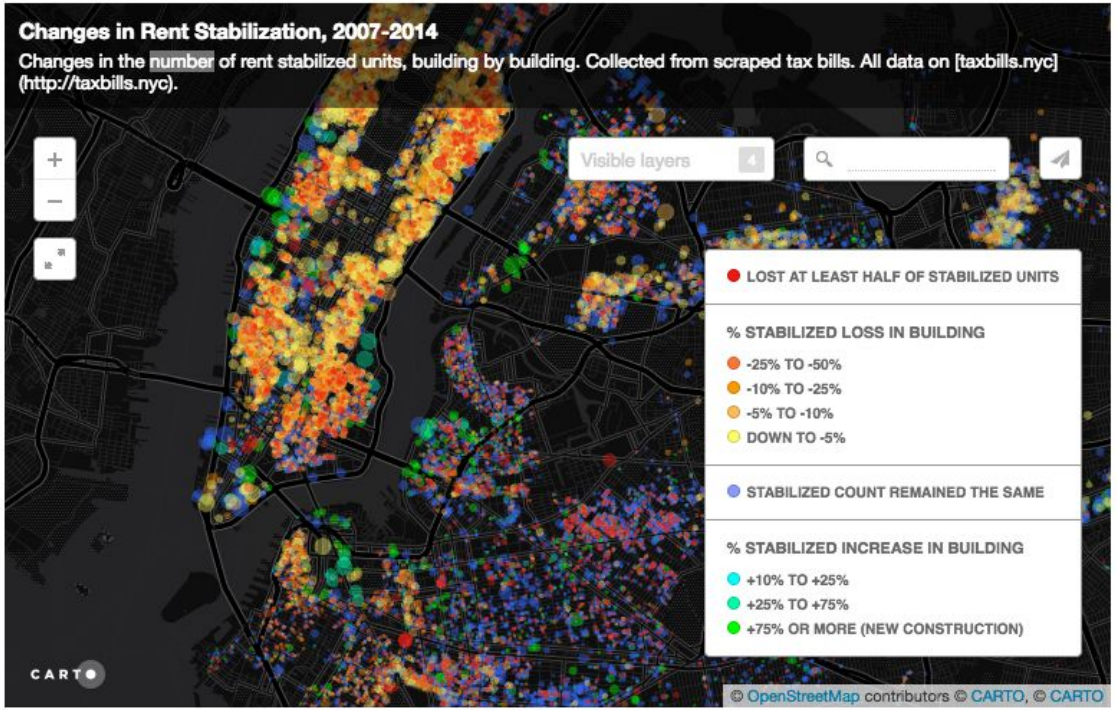
Existing Projects

Letitia James
Public Advocate for the City of New York

100 Worst Landlords in New York City

Go to the Landlord Watchlist to view a graphical version of this list.

Rank	Landlord	Buildings	UNITS	Violations
1	HARRY D SILVERSTEIN	8	575	2032
2	ALLAN GOLDMAN	25	187	1193
4	VED PARKASH	4	257	992
6	MICHAEL NIAMONITAKIS	5	225	936
7	FELIX GOMEZ	6	260	939
8	RAWLE ISAACS	4	214	869
9	JOEL KOHN	23	152	823
10	ISKYO ARONOV	16	66	789
11	DAVID DAVID	5	272	782
12	BRUCE HALEY	7	153	769
13	ISAAC SCHWARTZ	10	154	768
14	JOSEPH HOFFMAN	1	287	753
15	JONATHAN COHEN	17	144	718



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Data Sources:

The project entirely relies on open datasets

- Department of Buildings
  - Job Applications
  - Permits
  - Violations
  - ECB Violations
  - Complaints
- HPD
  - Complaints
  - Litigation
  - Registration
  - Multiple Dwelling Registrations
  - Violations
- Department of Finance
  - ACRIS
  - Abatements
  - Tax Bills
- Other
  - Pluto
  - Corporation Registrations
  - 311 Complaints
  - OATH ECB Hearings
  - Tenant Harassment Task Force Complaints

Requirements: Minimum Viable Product

- Epic I: Consolidated Dataset

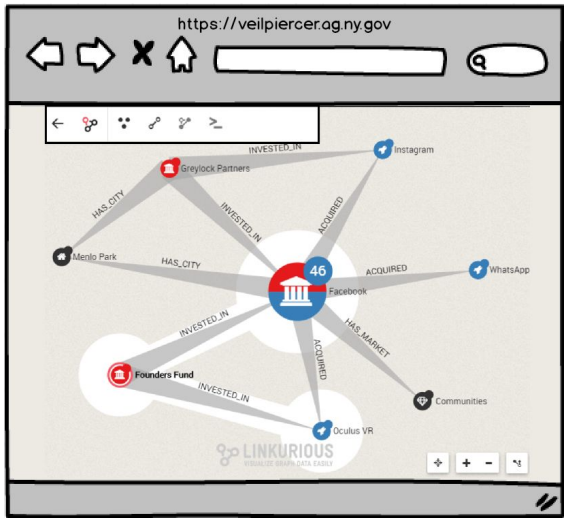
  Identify the relevant information from available NYC Open Data Sets
  Design the curated dataset schema
  Develop the mechanism to make the data -efficiently- available to the system

- Epic II: Interactive data exploration tool:

  Develop a web based tool to query the dataset following multiple criteria
  Develop relevant interactive visualizations for the different types of data returned
  Develop an API to query the system using Python and Django

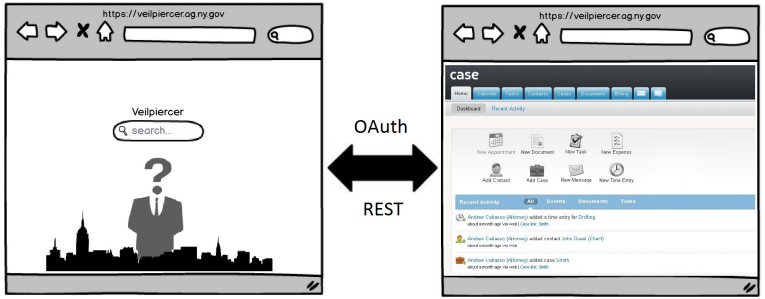
Next Steps: Post MVP refinements

Epic III: Graph Modeling:



Epic IV: Advanced analytics and ML insights

Epic V: Case Management System Integration



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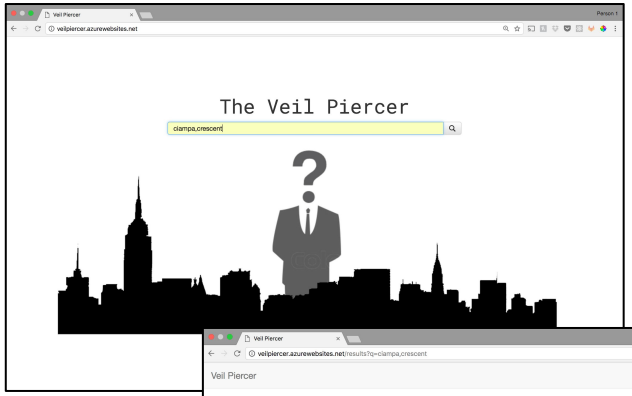
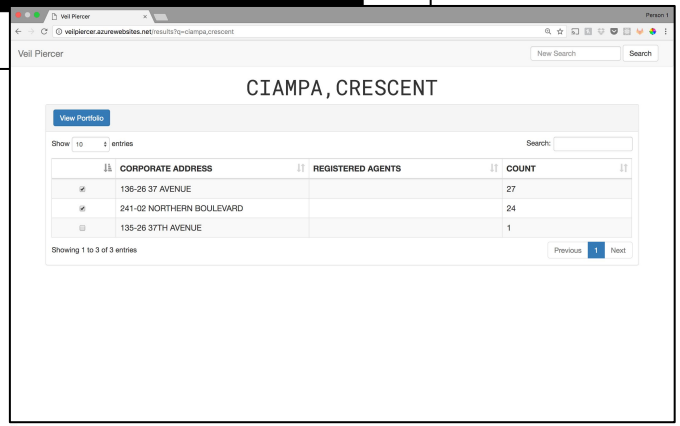
Project Deliverables:

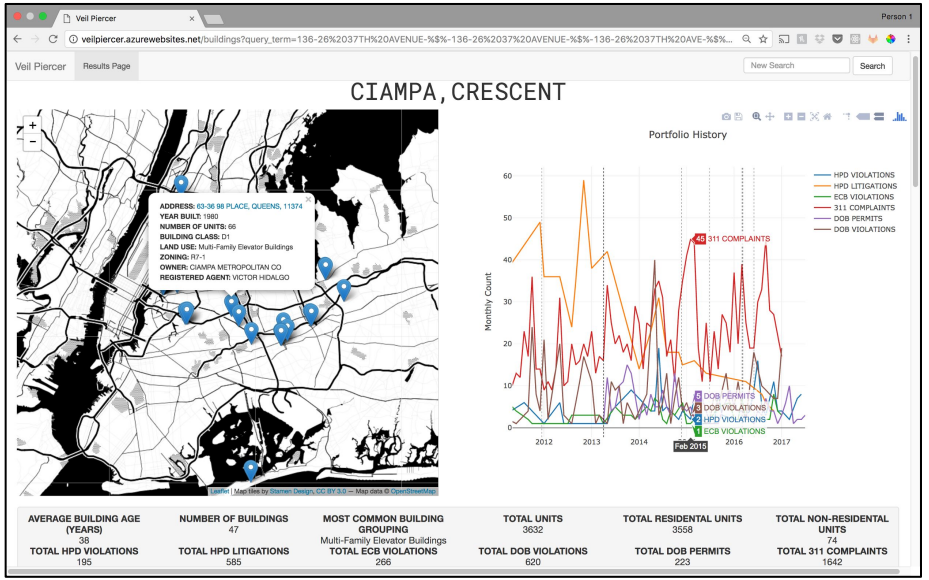
A running system that offers the required functionalities and that will be used by attorneys when doing research during their investigations. This includes:

- Software Packages: A set of software packages that will include: A front end application, a set of deployment scripts, database scripts and ETL (extraction, transformation and loading) scripts. The packages will be used by the OAG IT team to deploy the solution in production.
- Technical Documentation: Detailed system design, operational procedures (installation, maintenance, etc.), extensibility points (APIs or similar), and recommendations for future improvement.

Minimum Viable Product







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Minimum Viable Product : DEMO

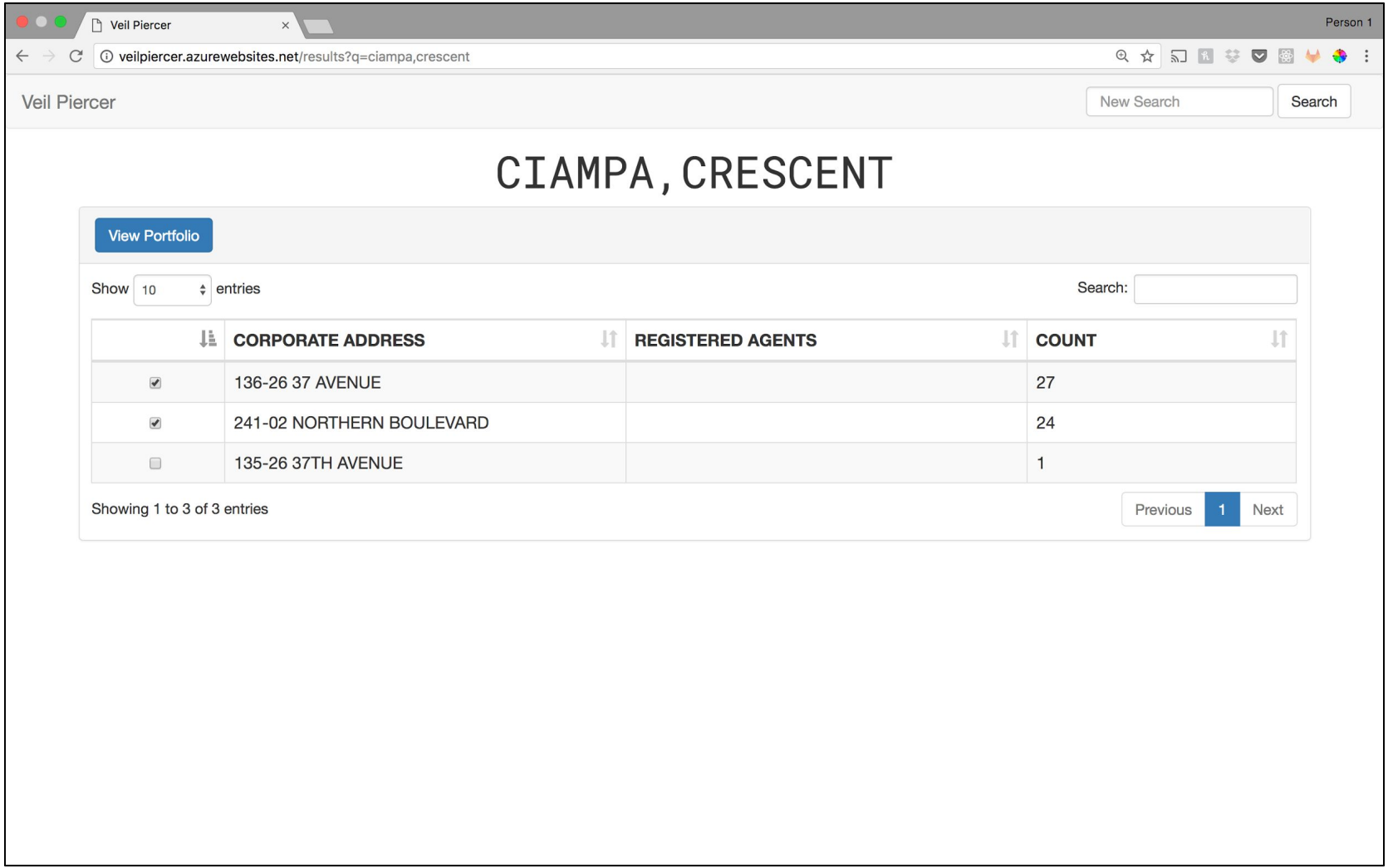
Veil Piercer

Person 1

veilpiercer.azurewebsites.net

The Veil Piercer

ciampa,crescent


Veil Piercer
Person 1
veilpiercer.azurewebsites.net/results?q=ciampa,crescent
Veil Piercer
New Search
Search
CIAMPA,CRESCENT
View Portfolio
Show 10 entries
Search:
CORPORATE ADDRESS
REGISTERED AGENTS
COUNT
136-26 37 AVENUE
27
241-02 NORTHERN BOULEVARD
24
135-26 37TH AVENUE
1
Showing 1 to 3 of 3 entries
Previous
1
Next

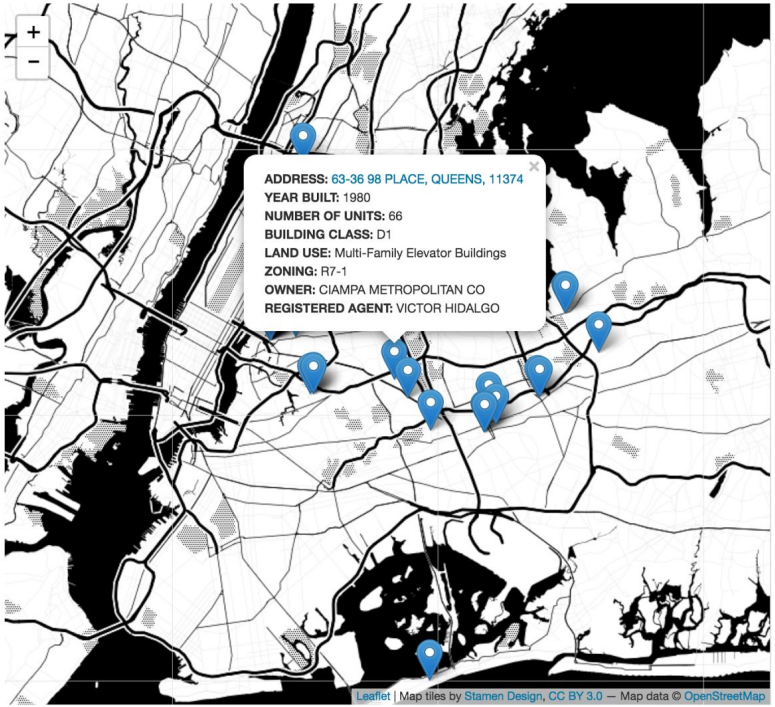
Veil Piercer

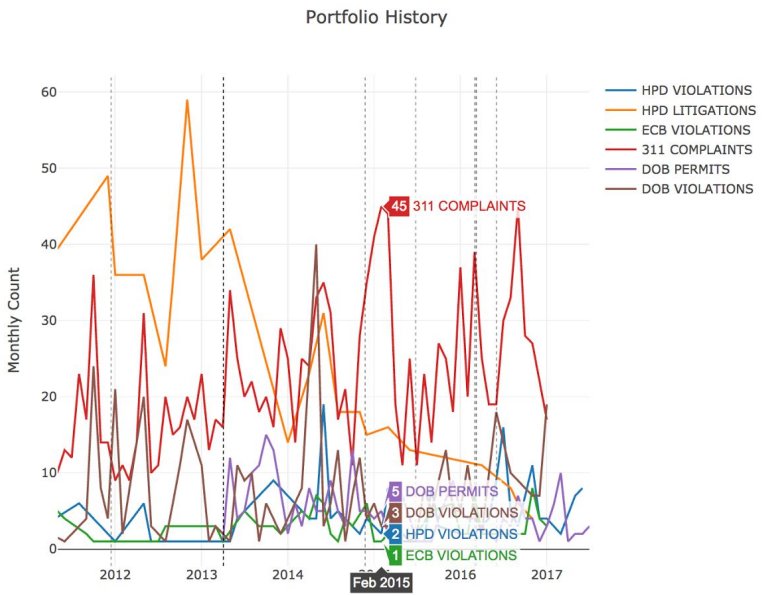
Person 1

veilpiercer.azurewebsites.net/buildings?query_term=136-26%2037TH%20AVENUE-%$%-136-26%2037%20AVENUE-%$%-136-26%2037TH%20AVE-%$%...

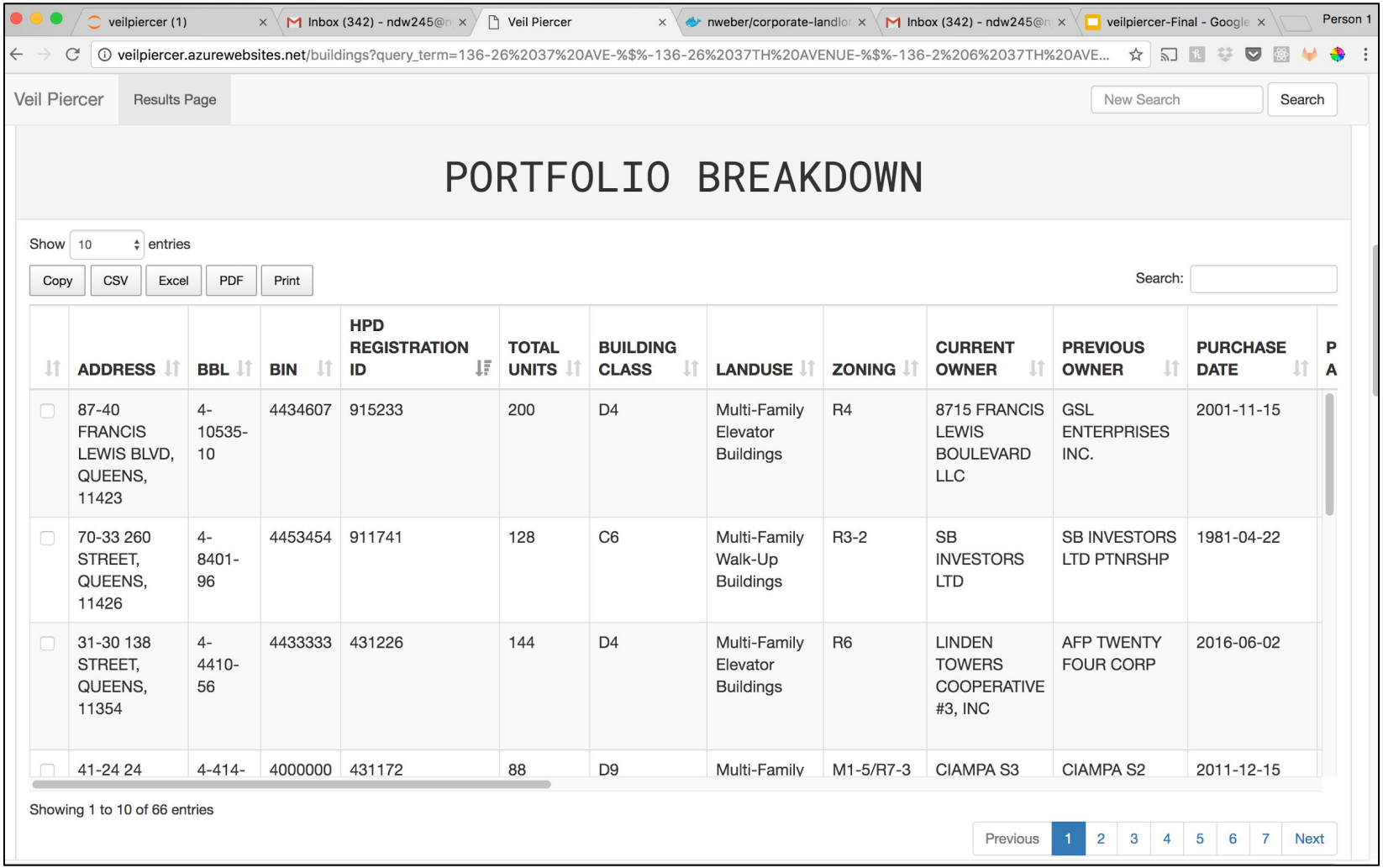
Veil Piercer | Results Page | New Search | Search

CIAMPA, CRESCENT





AVERAGE BUILDING AGE (YEARS)	**NUMBER OF BUILDINGS**	**MOST COMMON BUILDING GROUPING**	**TOTAL UNITS**	**TOTAL RESIDENTAL UNITS**	**TOTAL NON-RESIDENTAL UNITS**
38	47	Multi-Family Elevator Buildings	3632	3558	74
TOTAL HPD VIOLATIONS	**TOTAL HPD LITIGATIONS**	**TOTAL ECB VIOLATIONS**	**TOTAL DOB VIOLATIONS**	**TOTAL DOB PERMITS**	**TOTAL 311 COMPLAINTS**
195	585	266	620	223	1642


veilpiercer (1)
Inbox (342) - ndw245@n
Veil Piercer
nweber/corporate-landlo
Inbox (342) - ndw245@n
veilpiercer-Final - Google
Person 1
veilpiercer.azurewebsites.net/buildings?query_term=136-26%2037%20AVE-%$%-136-26%2037TH%20AVENUE-%$%-136-2%206%2037TH%20AVE...
Veil Piercer
Results Page
New Search
Search
PORTFOLIO BREAKDOWN
Show 10 entries
Copy
CSV
Excel
PDF
Print
Search:
ADDRESS
BBL
BIN
HPD REGISTRATION ID
TOTAL UNITS
BUILDING CLASS
LANDUSE
ZONING
CURRENT OWNER
PREVIOUS OWNER
PURCHASE DATE
87-40 FRANCIS LEWIS BLVD, QUEENS, 11423
4-10535-10
4434607
915233
200
D4
Multi-Family Elevator Buildings
R4
8715 FRANCIS LEWIS BOULEVARD LLC
GSL ENTERPRISES INC.
2001-11-15
70-33 260 STREET, QUEENS, 11426
4-8401-96
4453454
911741
128
C6
Multi-Family Walk-Up Buildings
R3-2
SB INVESTORS LTD
SB INVESTORS LTD PTNRSHP
1981-04-22
31-30 138 STREET, QUEENS, 11354
4-4410-56
4433333
431226
144
D4
Multi-Family Elevator Buildings
R6
LINDEN TOWERS COOPERATIVE #3, INC
AFP TWENTY FOUR CORP
2016-06-02
41-24 24
4-414-
4000000
431172
88
D9
Multi-Family
M1-5/R7-3
CIAMPA S3
CIAMPA S2
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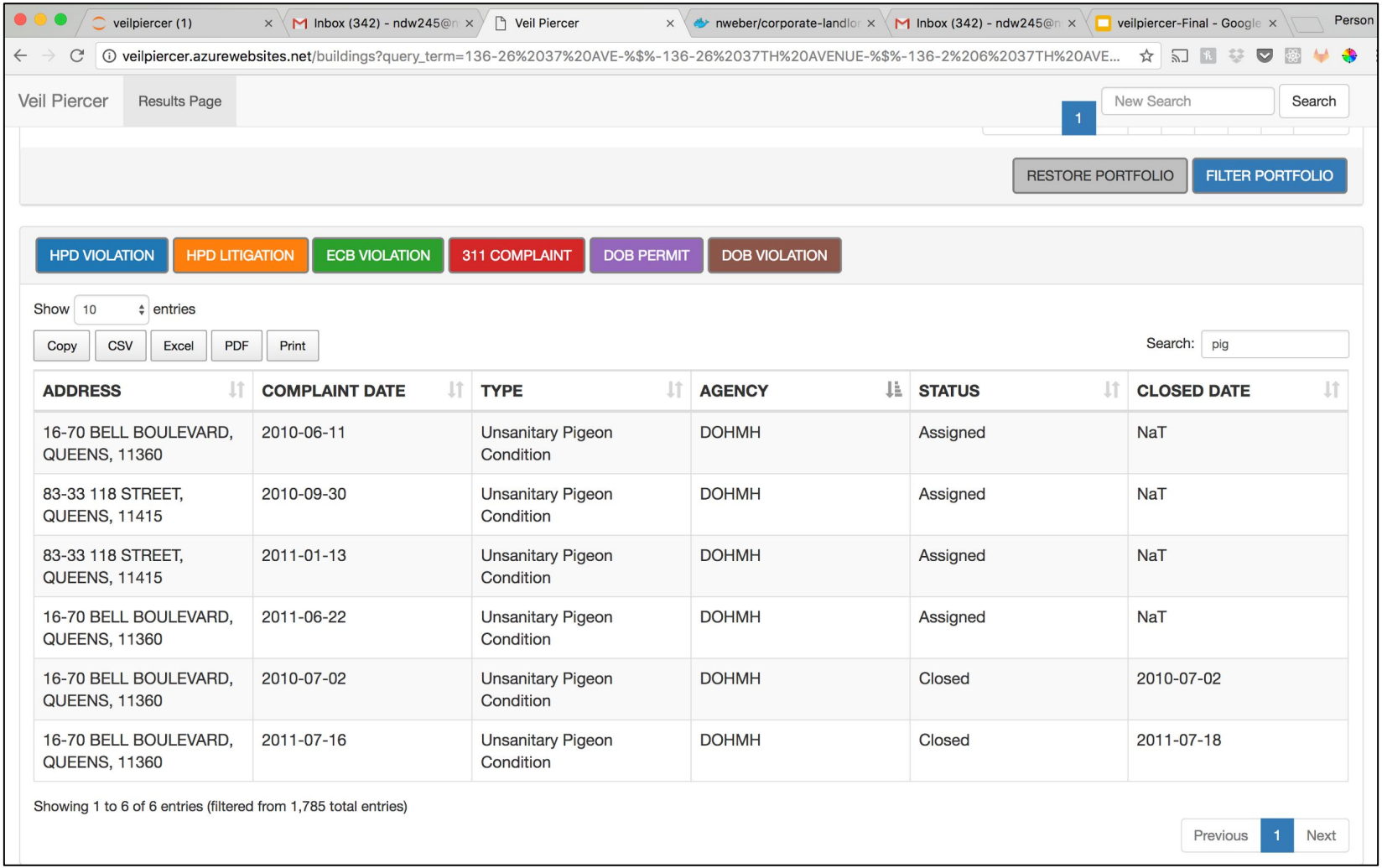
veilpiercer (1)
Inbox (342) - ndw245@n
Veil Piercer
nweber/corporate-landlor
Inbox (342) - ndw245@n
veilpiercer-Final - Google
Person
veilpiercer.azurewebsites.net/buildings?query_term=136-26%2037%20AVE-%$%-136-26%2037TH%20AVENUE-%$%-136-2%206%2037TH%20AVE...
Veil Piercer
Results Page
1
New Search
Search
RESTORE PORTFOLIO
FILTER PORTFOLIO
HPD VIOLATION
HPD LITIGATION
ECB VIOLATION
311 COMPLAINT
DOB PERMIT
DOB VIOLATION
Show 10 entries
Copy
CSV
Excel
PDF
Print
Search: pig
ADDRESS
COMPLAINT DATE
TYPE
AGENCY
STATUS
CLOSED DATE
16-70 BELL BOULEVARD, QUEENS, 11360
2010-06-11
Unsanitary Pigeon Condition
DOHMH
Assigned
NaT
83-33 118 STREET, QUEENS, 11415
2010-09-30
Unsanitary Pigeon Condition
DOHMH
Assigned
NaT
83-33 118 STREET, QUEENS, 11415
2011-01-13
Unsanitary Pigeon Condition
DOHMH
Assigned
NaT
16-70 BELL BOULEVARD, QUEENS, 11360
2011-06-22
Unsanitary Pigeon Condition
DOHMH
Assigned
NaT
16-70 BELL BOULEVARD, QUEENS, 11360
2010-07-02
Unsanitary Pigeon Condition
DOHMH
Closed
2010-07-02
16-70 BELL BOULEVARD, QUEENS, 11360
2011-07-16
Unsanitary Pigeon Condition
DOHMH
Closed
2011-07-18
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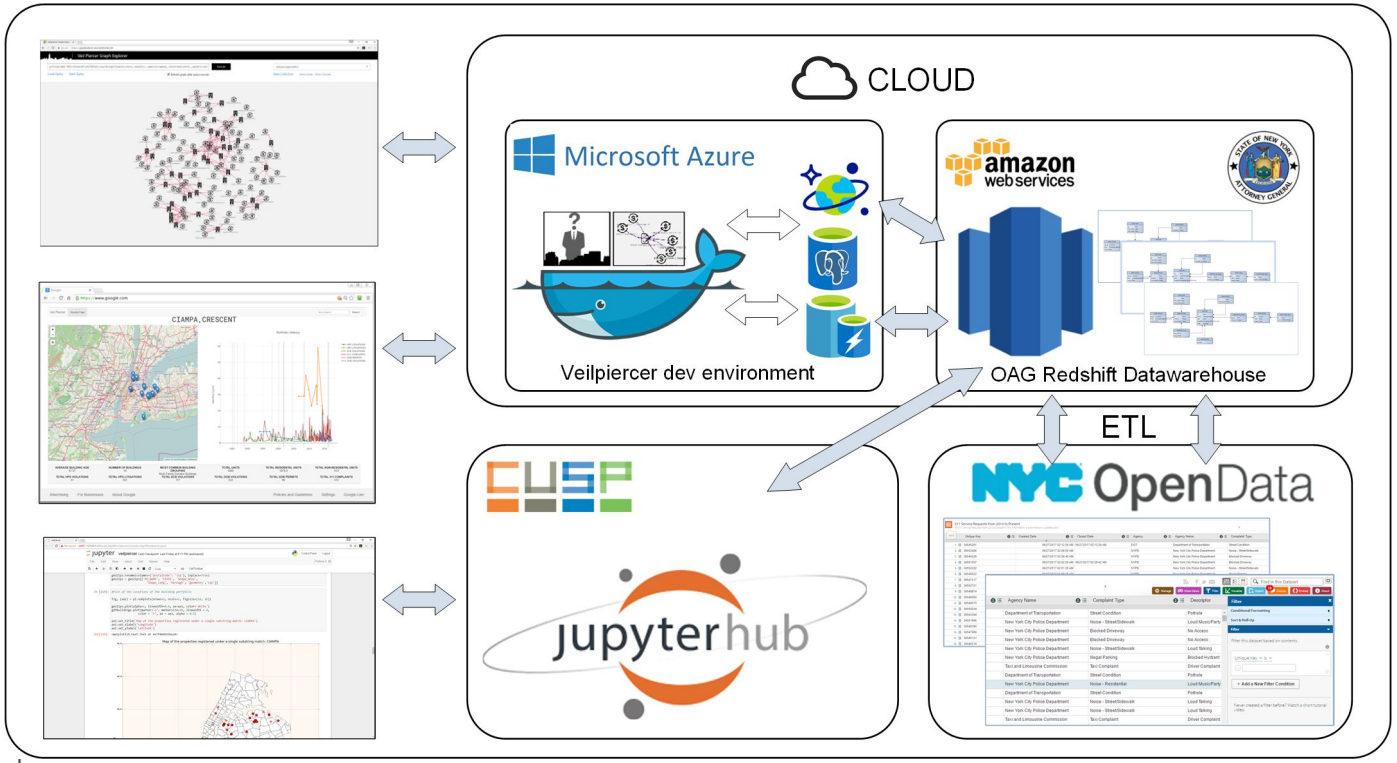
Previous
1
Next

Technology Landscape



Epic III PoC: Graph Modeling

- State of the art: Graph Databases

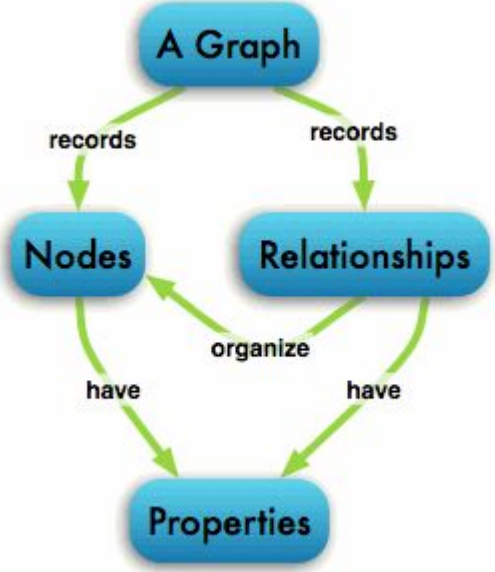
  Case studies and technologies used: Panama papers and Neo4J

  Open source alternatives: Apache Tinkerpop

- Prototype: Interactive data exploration tool:

  Deploy suitable services and import curated data collection as graphs

  Develop web application to query, visualize and interact with the graph data.



EPIC III PoC : DEMO

Veil Piercer Graph Explorer

g.V(); g.E()

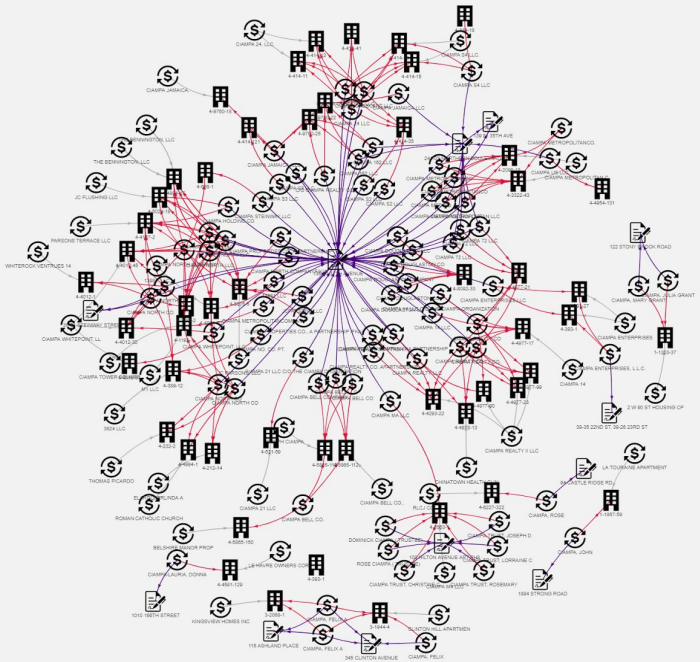
Execute

ciampa-organization

Load Query Save Query

Refresh graph after query execute

New Collection Show Guide Show Console



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Veil Piercer Graph Explorer

g.V().where(inE('isRegisteredToAddress').count().is(gt(1))).as('a').union(__.select('a'),__.select('a').repeat(__.in()).time

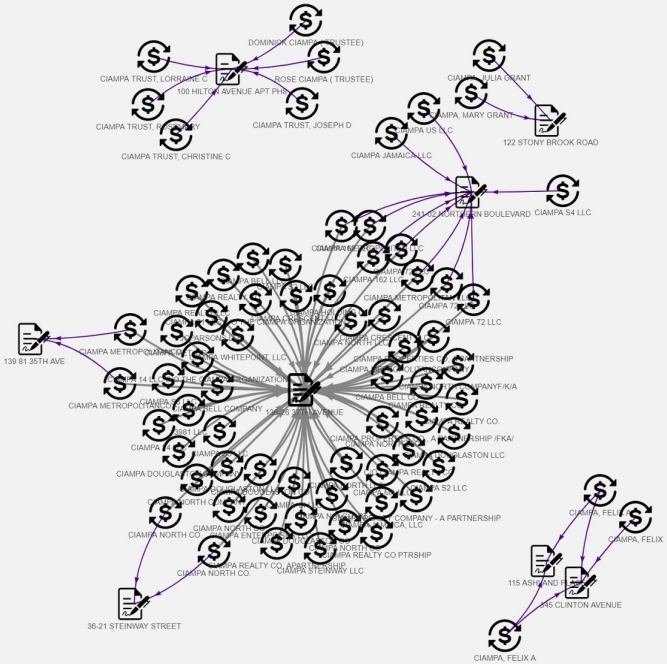
Execute

ciampa-organization

Load Query Save Query

Refresh graph after query execute

New Collection Show Guide Show Console



136-26 37TH AVENUE

Vertex: Address

Id: 393b024e-5d9a-496c-b0a7-31c74f274a25

Set label property for Node Type

Address

Search (json)

Properties	
Address	136-26 37TH AVENUE

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Veil Piercer Graph Explorer

g.V().has('label','BBL').where(inE('isACRISParty').count().is(gt(1))).as('a').union(__.select('a'),__.select('a').repeat(__.in

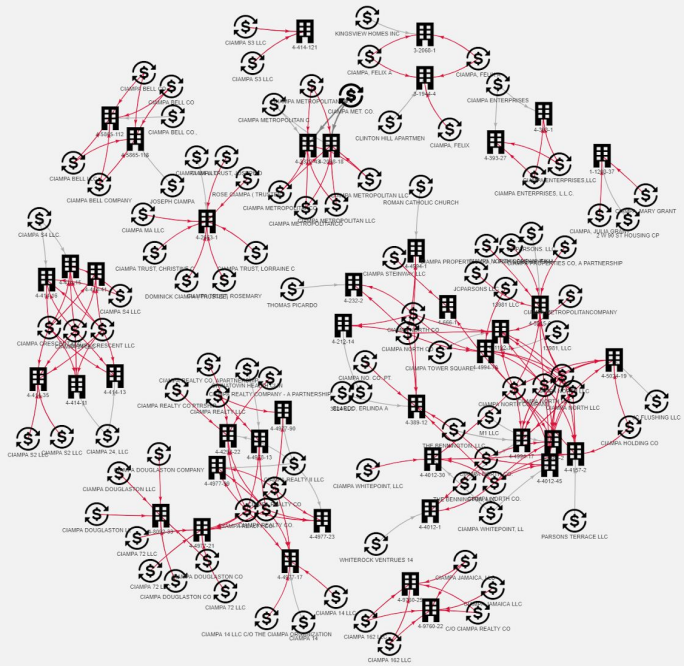
Execute

ciampa-organization

Load Query Save Query

Refresh graph after query execute

New Collection Show Guide Show Console



Configure Graph

CIAMPA MET. CO.

Vertex: LLC

Id: 9ed01cf3-62f9-4aee-9eab-aeb20d56035c

Set label property for Node Type

Name

Search {json}

Properties	
Name	CIAMPA MET. CO.
Address	136-26 37TH AVENUE

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Conclusions and future work

- Requirements Vs. Deliverables

  The deliverables fulfill all the requirements: The application was refined several times based on actual feedback from the end users

  A complete set of technical documents was developed along with the tool detailing both it's design and basic operational considerations

- Future work:

  Implementation of performance improvement strategies and transition to OAG environment

  Refine the PoC for the graph modeling Epic into a production ready tools

  Development of the epics IV and V

Contacts

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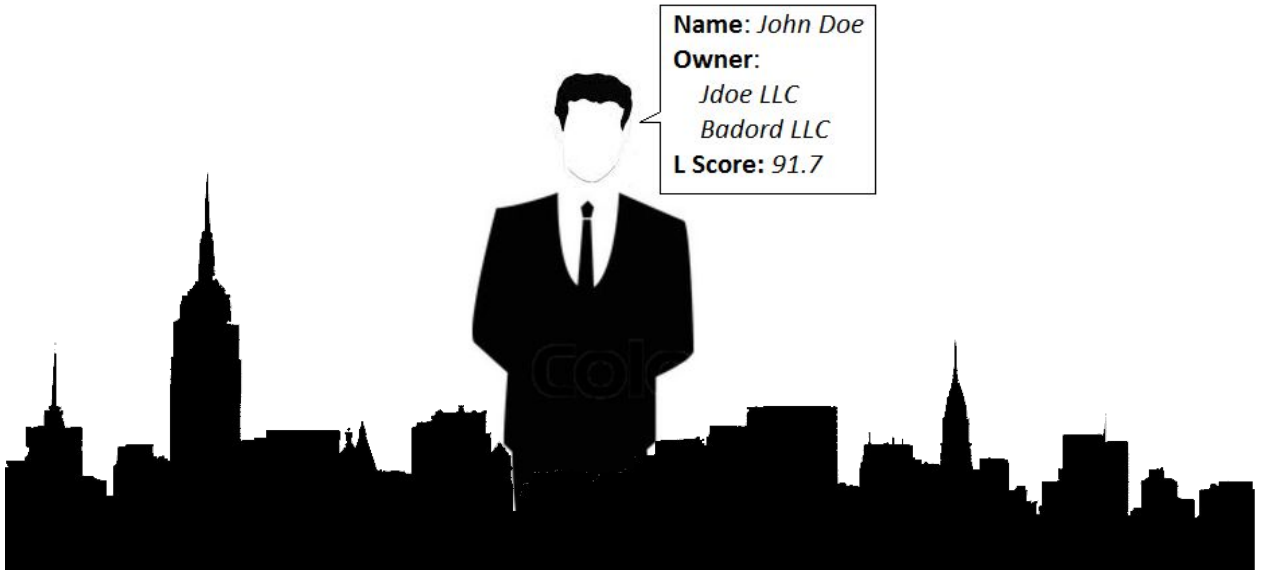

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