

ANALYSIS ON MWDSBE

Office of The Controller

- **Data**

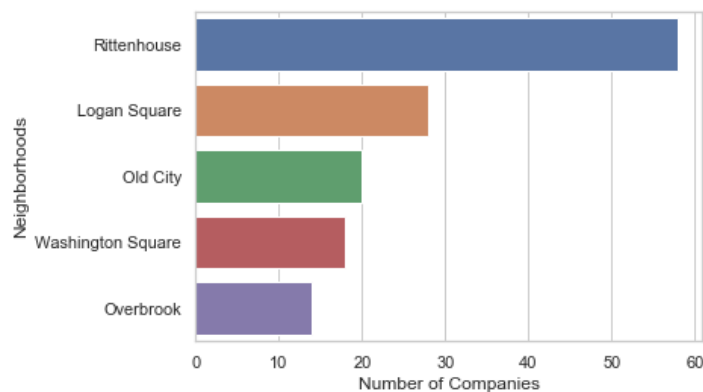
- Registry: all registered MWDSBE
- License: Commercial Activity Licenses. Information includes license information such as license number, activeness, etc.
- State License: list of sales tax licenses, exemption and wholesaler certificates as maintained by the Department of Revenue (DOR) that are active
- Payments: includes checks and ACH (direct deposit) payments made by the City during 2017 fiscal year.
- Professional Services: Professional Services Contracts by fiscal quarter from 2013 to 2019

- **Merging Algorithms:**

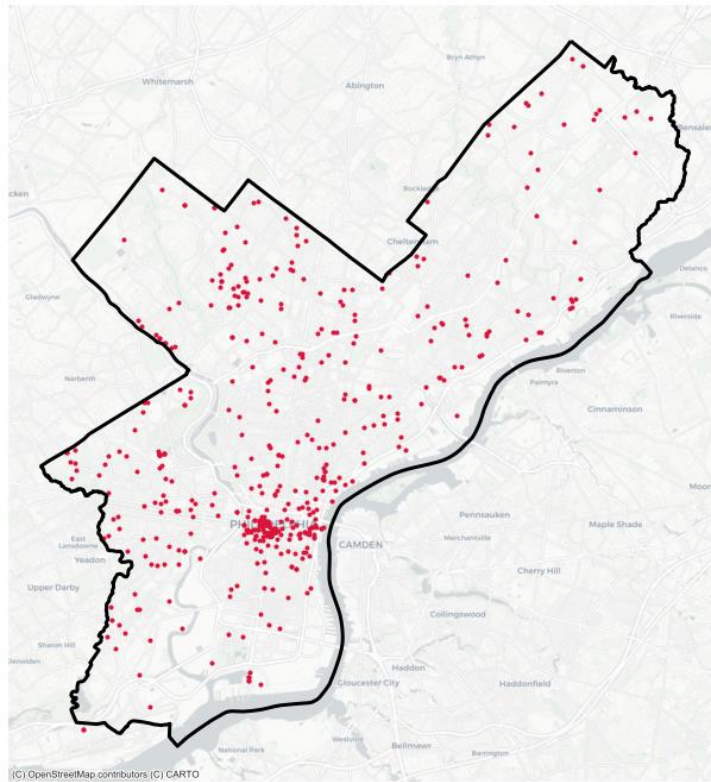
- Fuzzy Wuzzy with score cut-off 95
- TF-IDF with score cut-off 85
- Execution Time
 - Fuzzy Wuzzy: about 20 minutes
 - TF-IDF: about 3 minutes

- **Registry + License**

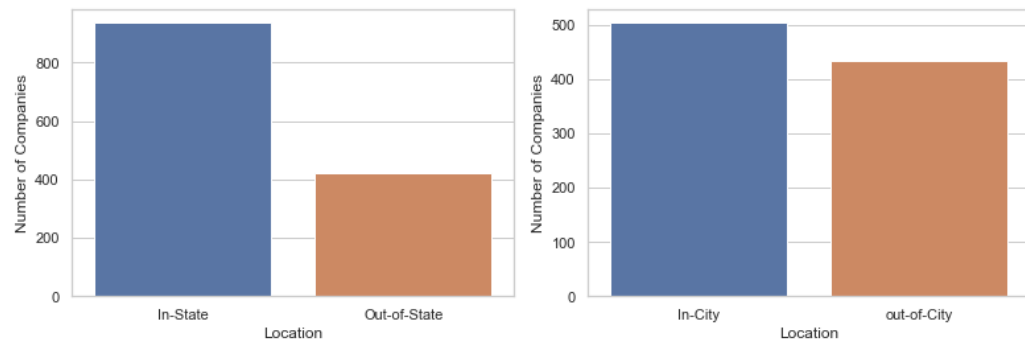
- Matched: 1566 out of 3119
- Active companies: 1553 out of 1566 (99%)
- Top 5 Neighborhoods



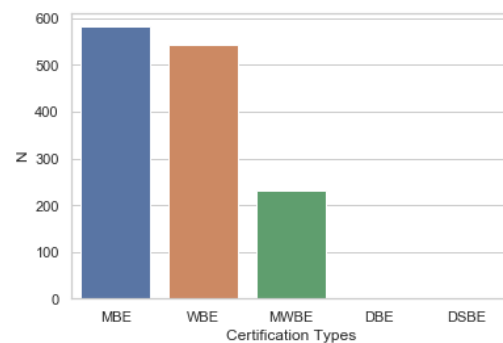
- Location of MWDSBE in Philadelphia



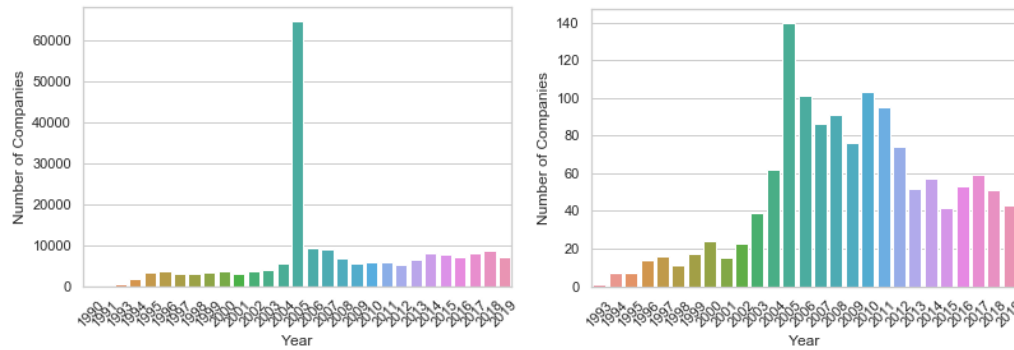
- In-State vs Out-of-State / In-City vs Out-of-City



- Certification Types



- Year Trends for Registry vs matched



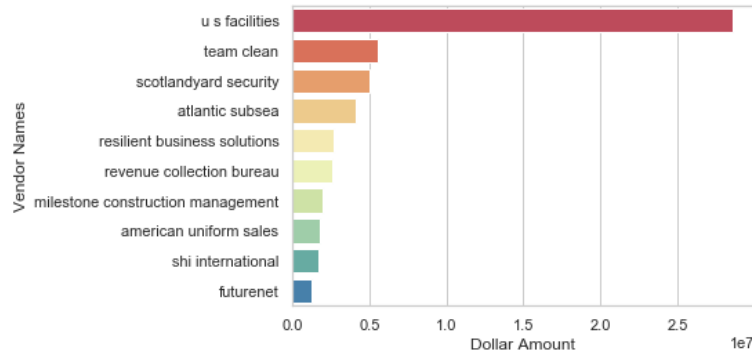
** NOTE: only used TD-IDF for fast testing*

- Registry (only in PA) + State License Data

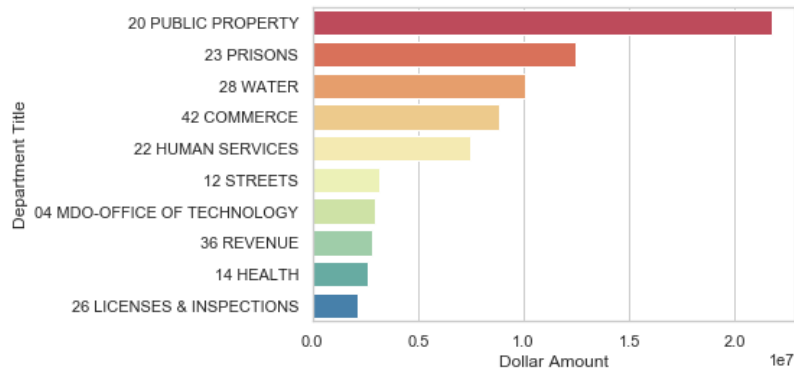
- Matched: 564 out of 1769
 - Newly found companies: 201

- Registry + Payments

- Matched: 369 out of 3119
 - Newly found companies: 61
- Top 10 Vendors by payments



- Top 10 Departments by payments



- Normalized Transaction Amount of MWDSBE by departments

	department_title	dollar_amount_x	dollar_amount_y	normalized_amount
33	30 ZONING BOARD	22168.73	2.216873e+04	1.000000
39	27 BOARD OF LICENSES & INSPECTIONS	9377.71	9.377710e+03	1.000000
34	63 BOARD OF REVISION OF TAXES	18233.46	6.008468e+04	0.303463
18	31 RECORDS	450192.21	1.935737e+06	0.232569
37	54 COMMISSION ON HUMAN RELATIONS	13304.40	6.272217e+04	0.212116
9	26 LICENSES & INSPECTIONS	2139198.04	1.149407e+07	0.186113
0	20 PUBLIC PROPERTY	21789145.90	1.475318e+08	0.147691
26	61 CITY CONTROLLER	55993.77	4.219127e+05	0.132714
1	23 PRISONS	12439553.07	1.041799e+08	0.119405
22	01 CITY COUNCIL	221994.07	2.009822e+06	0.110455

- **Registry + Professional Services Payments**
 - Matched: 205 out of 3119
 - Newly found companies: 71
- **Current Total Matches** = 1566 + 201 = 1767 out of 3119 (56.6%)
 - Only applied to “Registry + License”. Applying Fuzzy and TF-IDF algorithms to all dataset will increase the number (estimate 60%).