Data Catalog

Office of Chief Data Officer

CIVIC DIGITAL FELLOWSHIP

U.S. Citizenship and Immigration Services

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Information Science

What's the Problem?

BBSS

BCS

CIS

CRIS

CFR

CMIS

C3

CMS

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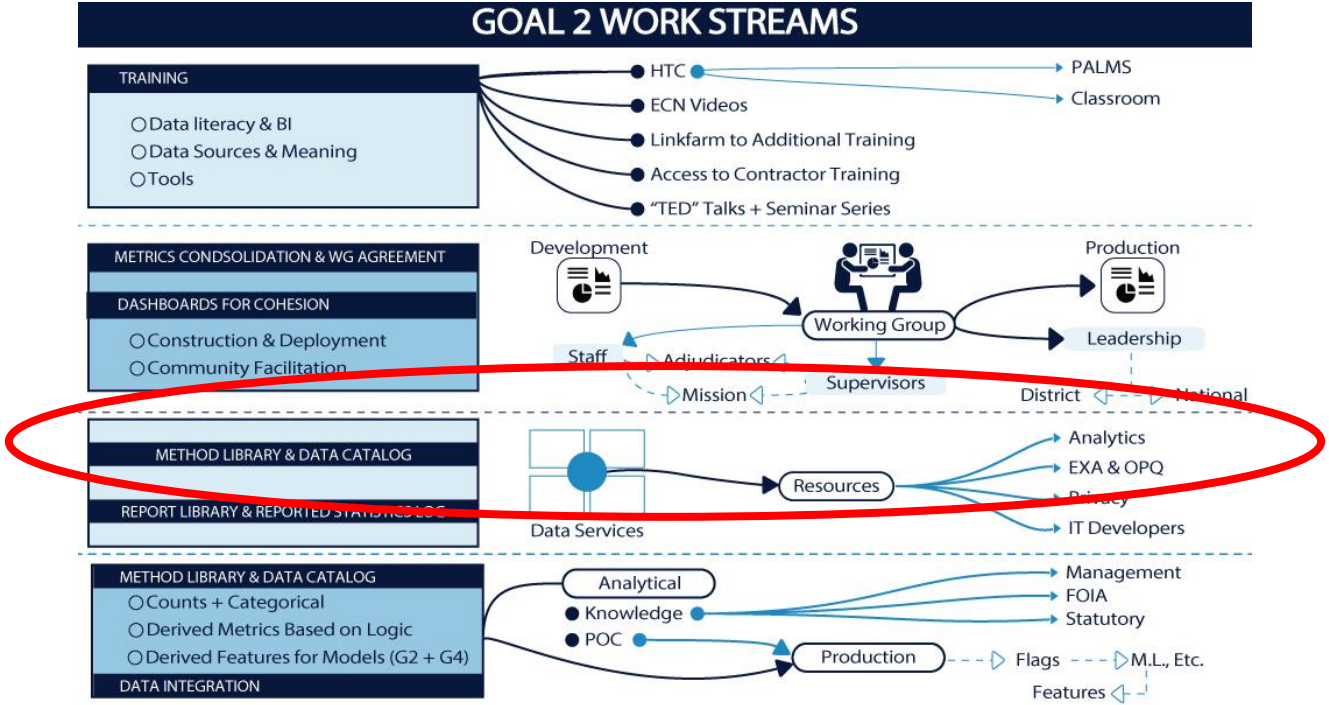
APRSAFE-AP-CCO	Location code for the asylum office with jurisdiction over the credible fear case	APSS.csv	APRSAFEAPCCO Location code for the asylum office with jurisdiction over the credible fear case
APRSAFE-AP-LAST-NAME	last name.	APSS.csv	APRSAFEAPLASTNAME last name.
APRSAFE-AP-FIRST-NAME	first name.	APSS.csv	APRSAFEAPFIRSTNAME first name.
APRSAFE-AP-MIDDLE-NAME	middle name.	APSS.csv	APRSAFEAPMIDDLENAME middle name.

LAST_NAME	Last name (EFTS field 2.907).	BBSS.csv
FIRST_NAME	First name (EFTS field 2.908).	BBSS.csv

What is it? Why?



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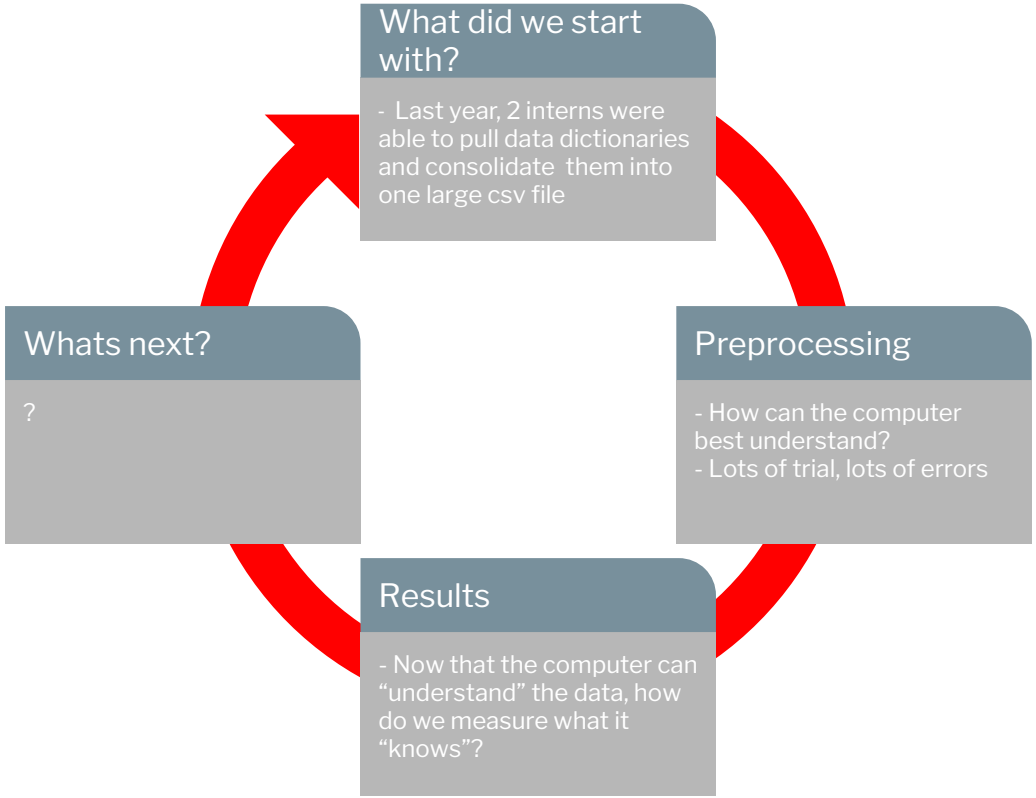
The Process



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What did we Start With?

	A	B	C	D
1	Field	Field_Desc	Source	Combined
2	APRSAFE-AP-APPL-A-NUM	Applicant–ís A-number	APSS.csv	APRSAFEAPAPPLANUM Applicants Anumber
3	APRSAFE-AP-PRIN-A-NUM	Principal applicant–ís A-number	APSS.csv	APRSAFEAPPRINANUM Principal applicants Anumber
4	APRSAFE-AP-CCO	Location code for the asylum office with jurisdiction over the credible fear case	APSS.csv	APRSAFEAPCCO Location code for the asylum office with jurisdiction over the credible fear case
5	APRSAFE-AP-LAST-NAME	last name.	APSS.csv	APRSAFEAPLASTNAME last name.
6	APRSAFE-AP-FIRST-NAME	first name.	APSS.csv	APRSAFEAPFIRSTNAME first name.
7	APRSAFE-AP-MIDDLE-NAME	middle name.	APSS.csv	APRSAFEAPMIDDLENAME middle name.
8	APRSAFE-AP-AKA-LAST-NAME	Alias for last name	APSS.csv	APRSAFEAPAKALASTNAME Alias for last name
9	APRSAFE-AP-AKA-FIRST-NAME	Alias for first name	APSS.csv	APRSAFEAPAKAFIRSTNAME Alias for first name
10	APRSAFE-AP-BIRTH-DATE	Birthdate	APSS.csv	APRSAFEAPBIRTHDATE Birthdate
11	APRSAFE-AP-SDX-LNAME-CODE		APSS.csv	APRSAFEAPSDXLNAMECODE
12	APRSAFE-AP-SDX-FNAME-CODE		APSS.csv	APRSAFEAPSDXFNAMECODE
13	APRSAFE-AP-SEX-CODE	Sex.	APSS.csv	APRSAFEAPSEXCODE Sex.
14	APRSAFE-AP-COB-CODE	Country of Birth	APSS.csv	APRSAFEAPCOBCODE Country of Birth
15	APRSAFE-AP-CITIZEN1-CODE	Applicant–ís 1st citizenship code	APSS.csv	APRSAFEAPCITIZEN1CODE Applicants 1st citizenship code
16	APRSAFE-AP-CITIZEN2-CODE	Applicant–ís 2nd citizenship code	APSS.csv	APRSAFEAPCITIZEN2CODE Applicants 2nd citizenship code
17	APRSAFE-AP-APPL-LANG1-CODE	Applicant's 1st language code	APSS.csv	APRSAFEAPAPPLLANG1CODE Applicant's 1st language code
18	APRSAFE-AP-PORT-OF-ENTRY-CODE	Port of Entry Code	APSS.csv	APRSAFEAPPORTOFENTRYCODE Port of Entry Code
19	APRSAFE-AP-US-ARRIVAL-DATE	US Arrival Date	APSS.csv	APRSAFEAPUSARRIVALDATE US Arrival Date

APRSAFE-AP-AKA-FIRST-NAME	Alias for first name	APSS.csv	APRSAFEAPAKAFIRSTNAME Alias for first name

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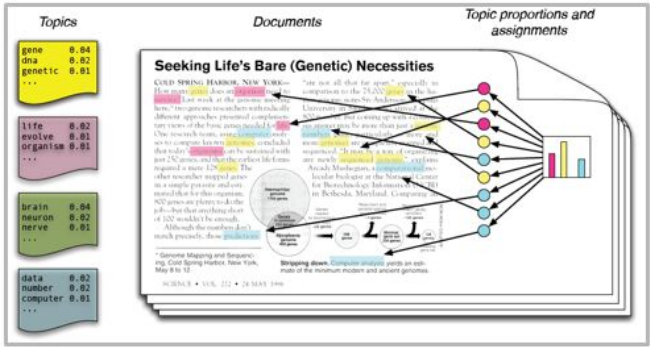
Preprocessing

- Load it into Python (*Applicant¬ís A-number*)
- Stripped punctucation (*applicantx96s a-number*)
- Removed Stop Words (*applicants a-number)*
- Stemmed (*applicant a-number)*
- Tokenized (“*applicant*” , ‘*a-number*”)



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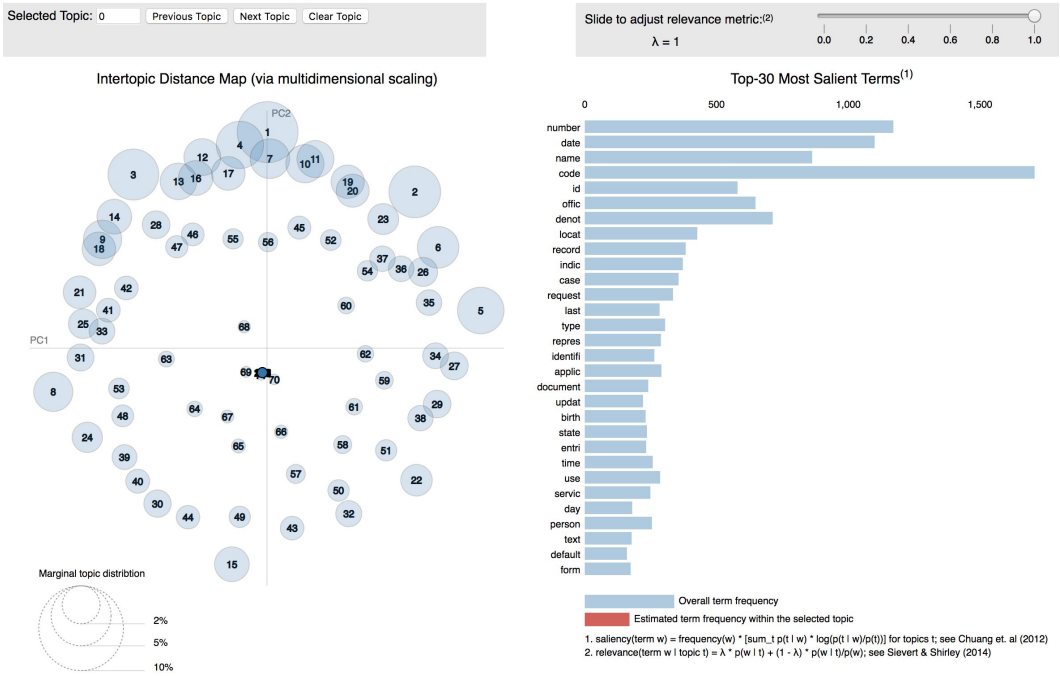
Results



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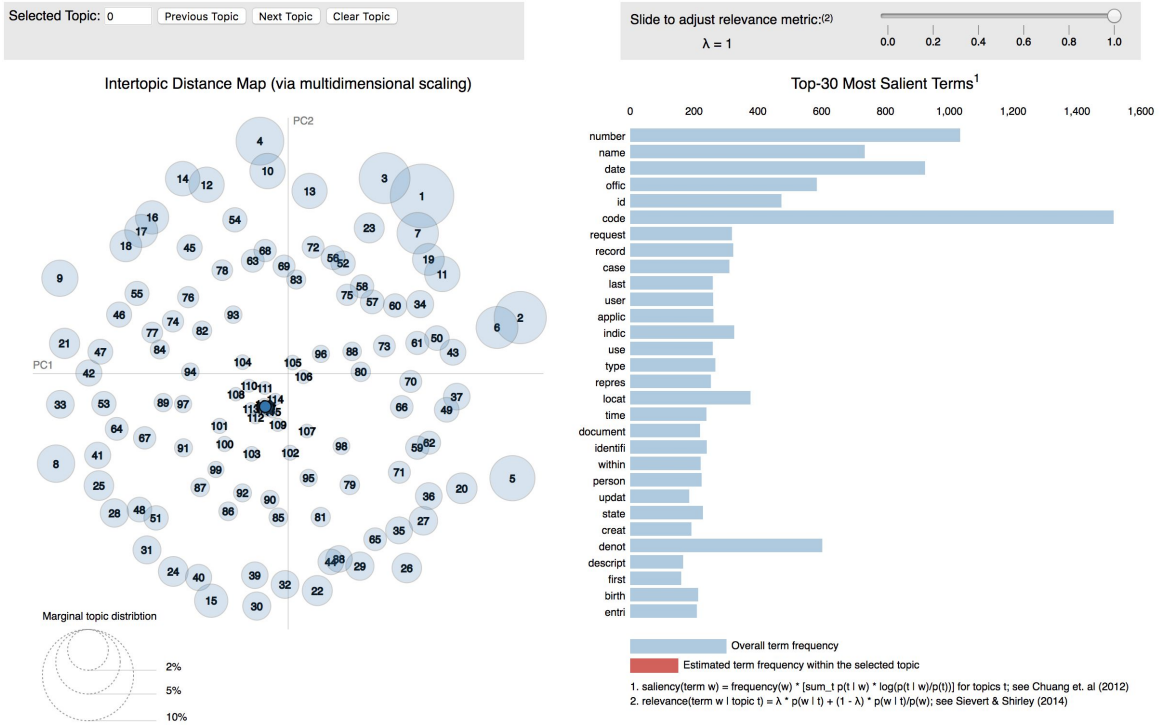
Results



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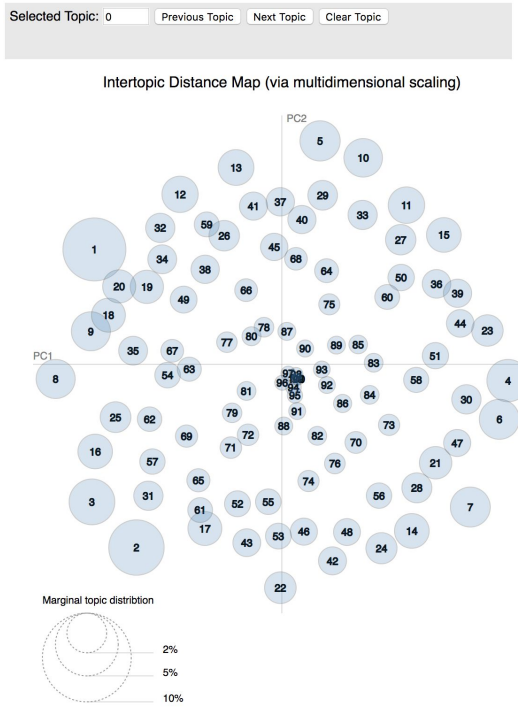
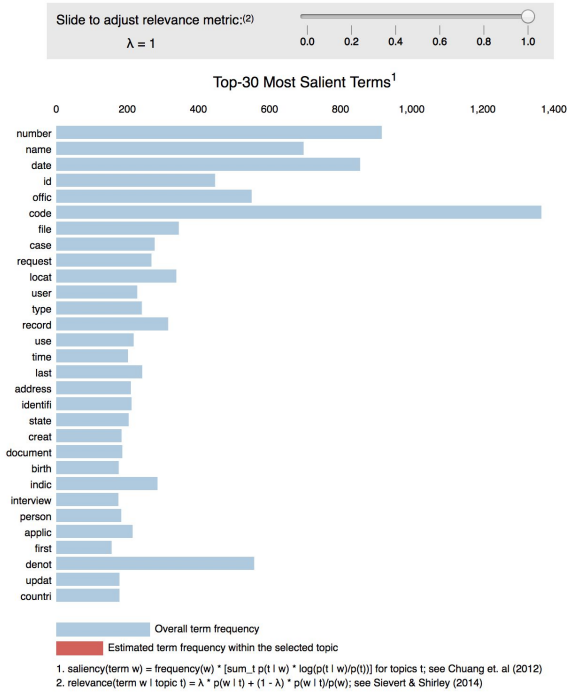
Results





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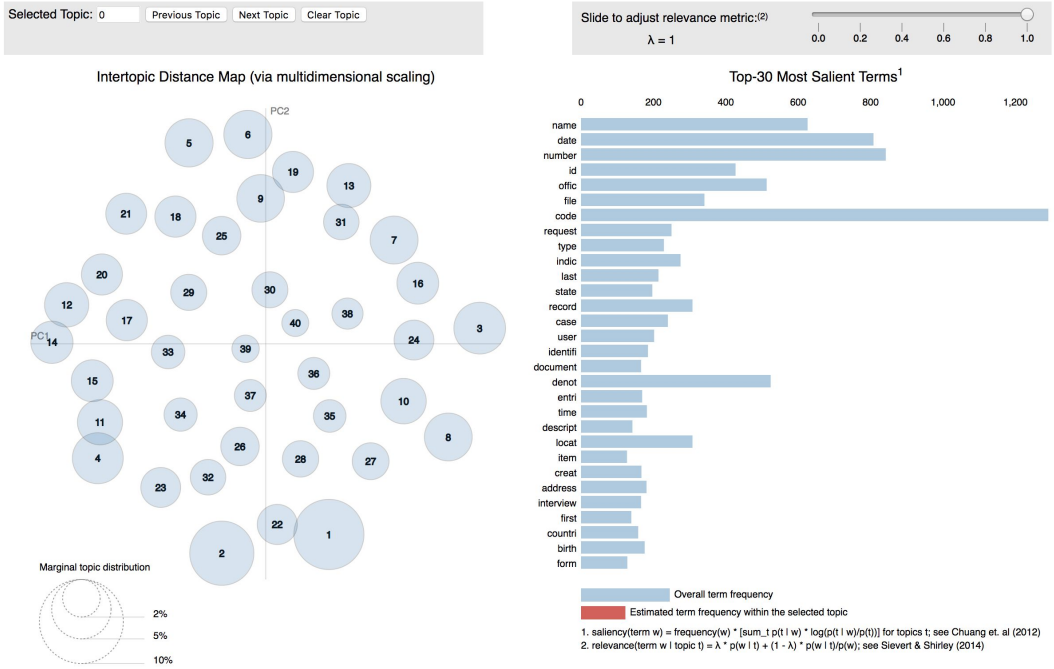
Results



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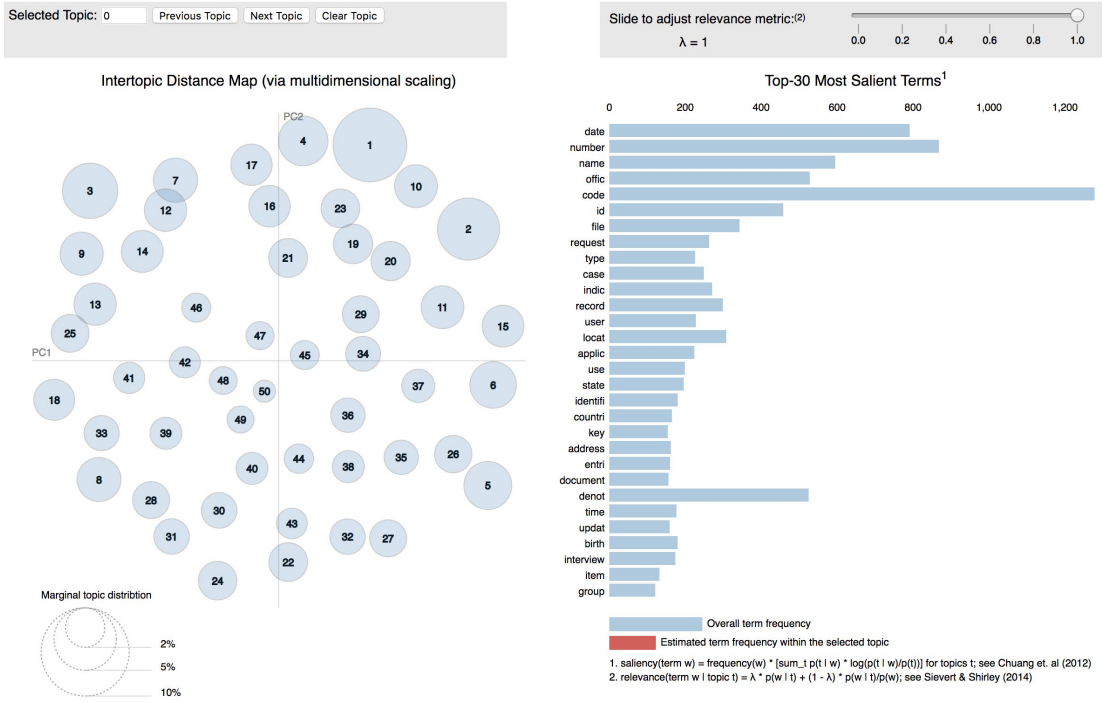
Results



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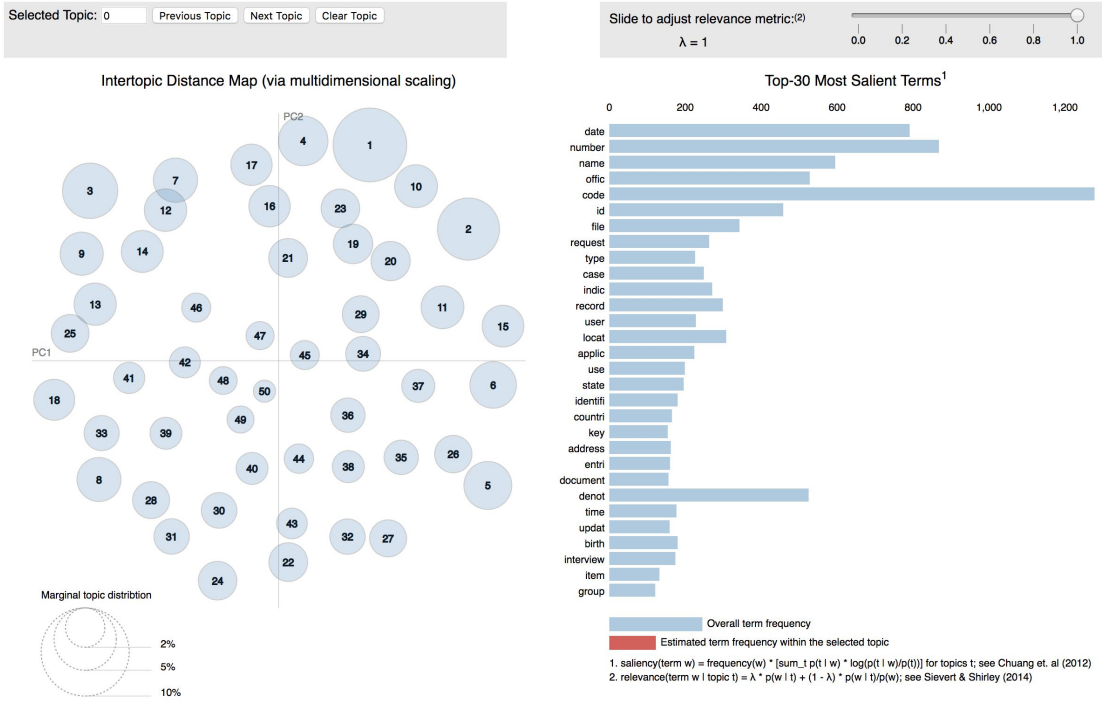
Results



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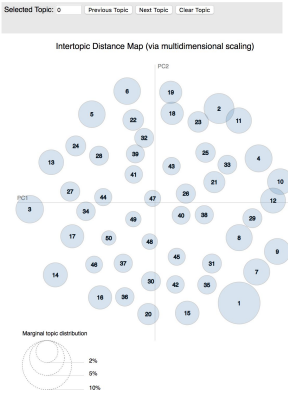
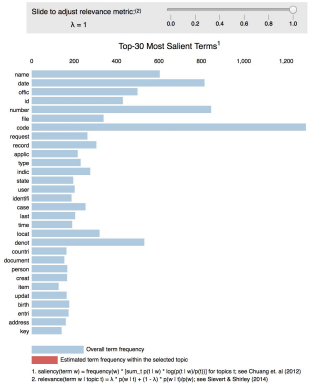
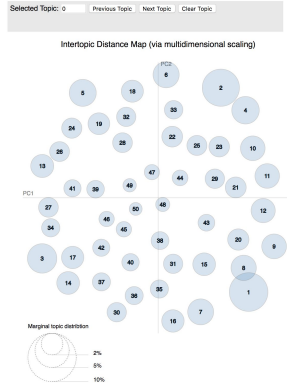
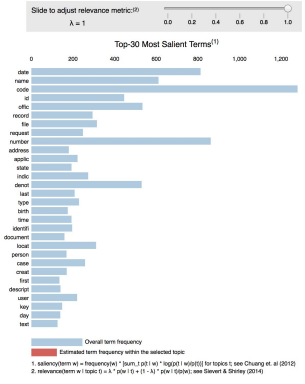
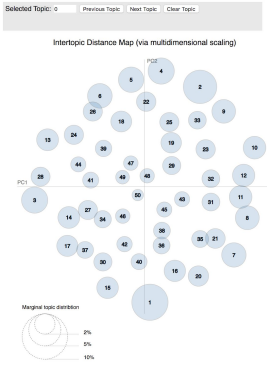
Results

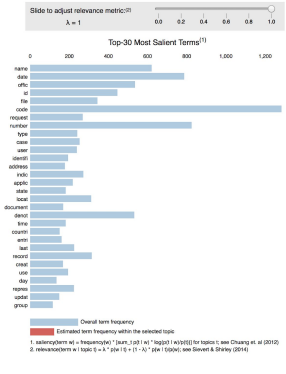












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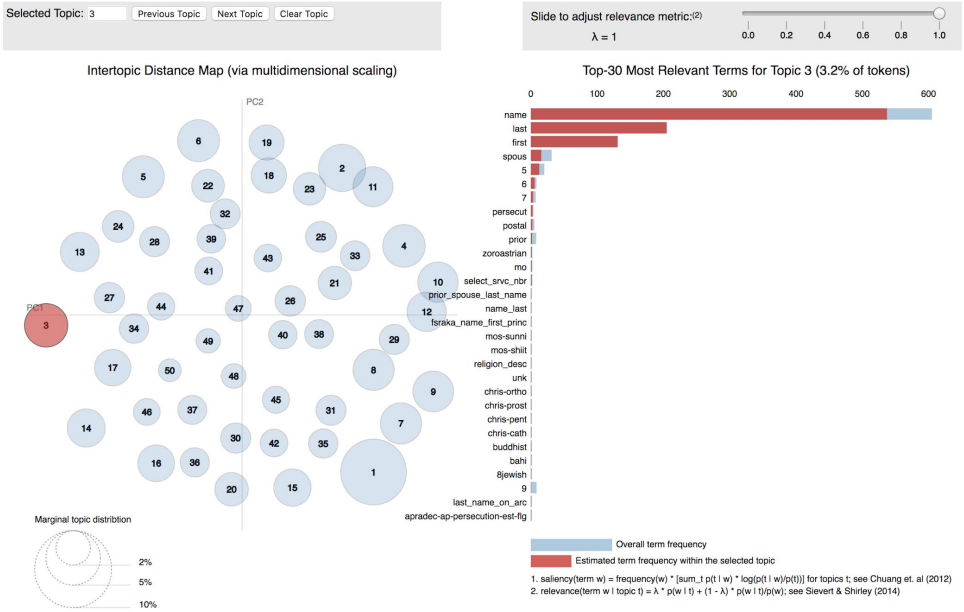
Results



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Takeaways

- Work with Data Standards Team (Data Governance)
- Try other word vectorizations:
    - Word2vec, GloVec
        - Different groupings
- Utilize named entity recognition - customize (Stanford Named Entity Recognizer (NER))
- Semantic Parsing (NLTK)

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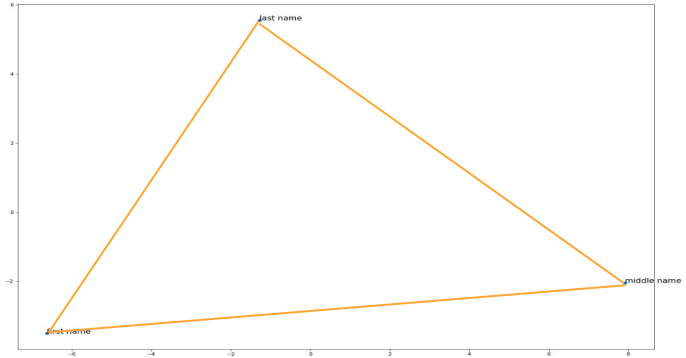
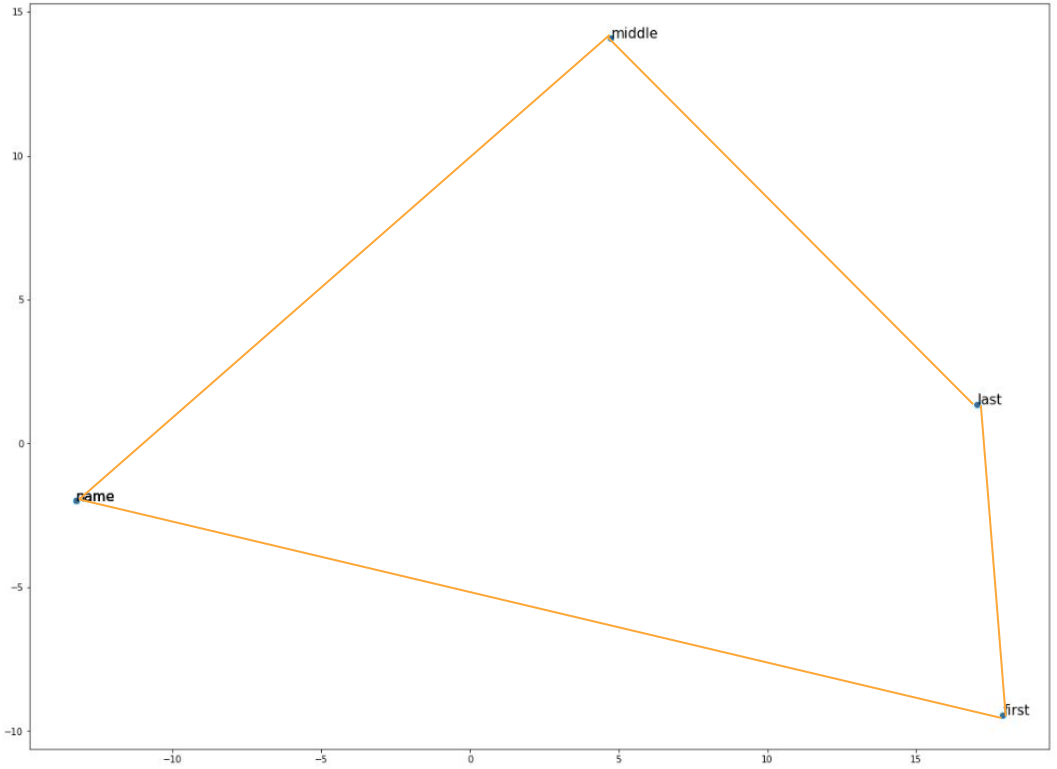
Takeaways (continued)





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Thanks!

- OCDO (Damian, Justin, everyone)
- RAIO(Logan, Michael, Nevin, Christine, everyone)
- All of you!

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