

VIRTUAL LANDMAN



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Objective:

Scrape mineral leases from Weld County website to find expired land parcels.

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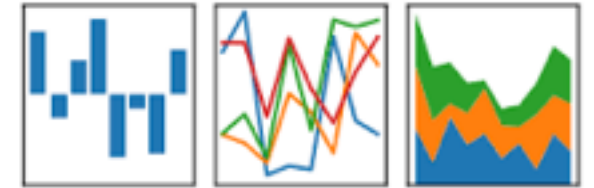
DATA COLLECTION

mechanize



DATA WRANGLING

pandas
 $y_{it} = \beta' x_{it} + \mu_i + \epsilon_{it}$



reg[ular]
expr[essio]n

multiprocessing

DATA STORAGE



MACHINE LEARNING



WELL...

OIL AND GAS LEASE

This Oil and Gas Lease ("Lease") is made this 22 of August, 2012 by and between **Bradley D Swift** whose address is **1939 12 AVE GREELEY, CO 80631**, ("Lessor", whether one or more) and **MINERAL RESOURCES, INC.**, whose address is **P.O. BOX 328, GREELEY, COLORADO 80632** ("Lessee").

WITNESSETH, For and in Consideration of TEN DOLLARS, the covenants and agreements contained herein, and other good and valuable consideration the receipt and sufficiency of which are hereby acknowledged, Lessor does hereby grant, demise, lease and let exclusively unto said Lessee, with the exclusive rights for the purposes of mining, exploring by geophysical and other methods and operating for and producing therefrom oil and all gas of whatsoever nature or kind (including coalbed gas) and the exclusive subsurface rights and privileges related in any manner to any and all such operations, and any and all other rights and privileges necessary, incident to, or convenient for the operation alone or conjointly with neighboring land for such purposes, all that certain tract or tracts of land situated in Weld County, Colorado, described to wit:

TOWNSHIP 5 NORTH, RANGE 65 WEST, 6TH P.M.

SECTION 7: PART OF THE SE/4 BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: GR EAST 140' LOT 1, BLOCK 10 2ND ADD TO CRANFORD, ALSO KNOWN AS 1939 12 AVENUE GREELEY, COLORADO INCLUDING ALL STRIPS AND PARCELS OF LAND CONTIGUOUS THERETO OR IN SAID SECTION. CONTAINING 0.225 ACRES, MORE OR LESS (the "Premises")

This lease is a "No Surface Occupancy" Oil and Gas Lease. It is agreed and understood that Lessee its successors or assigns shall not conduct any operations or locate any facilities on the surface of the leased lands. It is understood that Lessee, its successors or assigns shall not be allowed any access to the surface of the leased lands without written consent of Lessor. It is further agreed that Lessee shall have the right to drill and operate directional wells through and under said land irrespective of the bottom hole locations of said wells. To this end, Lessor hereby grants to Lessee a subsurface easement for all purposes associated with such directional wells.

oil and gas lease this oil and gas lease ("lease") is made this 00, 2012 by and between Bradley D Swift whose address is 1939 12 Ave Greeley, CO 80631, ("lessor", whether one or more) and mineral resources, inc., whose address is P.O. box 328, Greeley, Colorado 80632 ("lessee"). f d witnesseth, for and in consideration of ten dollars, the covenants and agreements contained herein, and other good and valuable consideration the receipt and sufficiency of which are hereby acknowledged, lessor does hereby grant, demise, lease and let exclusively unto said lessee, with the exclusive rights for the purposes of mining, exploring by geophysical and other methods and operating for and producing therefrom oil and all gas of whatsoever nature or kind (including coalbed gas) and the exclusive subsurface rights and privileges related in any manner to any and all such operations, and any and all other rights and privileges necessary, incident to, or convenient for the operation alone or conjointly with neighboring land for such purposes, all that certain tract or tracts of land situated in Weld county, Colorado, described to wit: township 5 north, range 65 west, 6th p.m. section 7: part of the se/4 being more particularly follows: gr east 140' lot 1, block 10 2nd add to Cranford, also known including all strips and parcels of land contiguous or in said section. containing 0.225 acres, more or less (the "premises") Greeley, Colorado as 1939 12 Avenue described as thereto this lease is a "no surface occupancy" oil and gas lease. it is agreed and understood that lessee its successors or assigns shall not conduct any operations or locate any facilities on the surface of the leased lands. it is understood that lessee, its successors or assigns shall not be allowed any access to the surface of the leased lands without written consent of lessor. it is further agreed that lessee shall have the right to drill and operate directional wells through and under said land irrespective of the bottom hole locations of said wells. to this end, lessor hereby grants to lessee a subsurface easement for all purposes associated with such directional wells.

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Text segments are, from an NLP perspective, the atoms of which language is composed.

-Lenz Furrer et al.

SCIENCE!

DATA SCIENCE

Word-Scanning

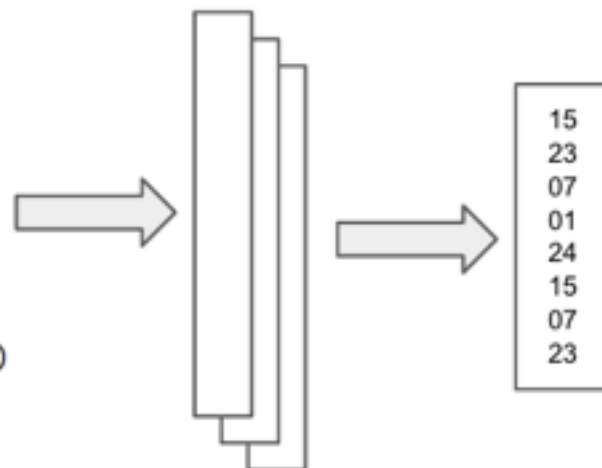
```
for i in range(len(text)):
    ...
    if word in vocab:
        ...
```



Neural Net

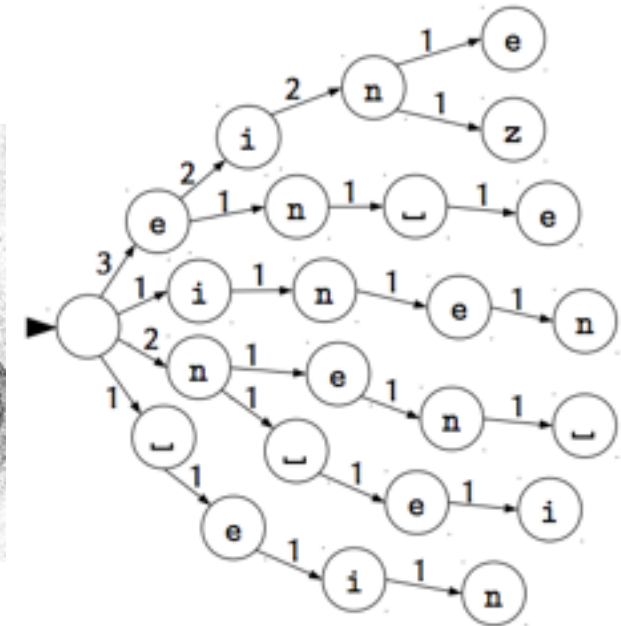
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       [16, 18, 15, ...,  5,  4, 20],
       ...,
       [12, -45, 12, ...,  9, -46, -48],
       [12, -45, 12, ...,  9, -46, -48],
       [12, 12, 12, ...,  8,  5, 12]])
```



Unsupervised Text Segmentation

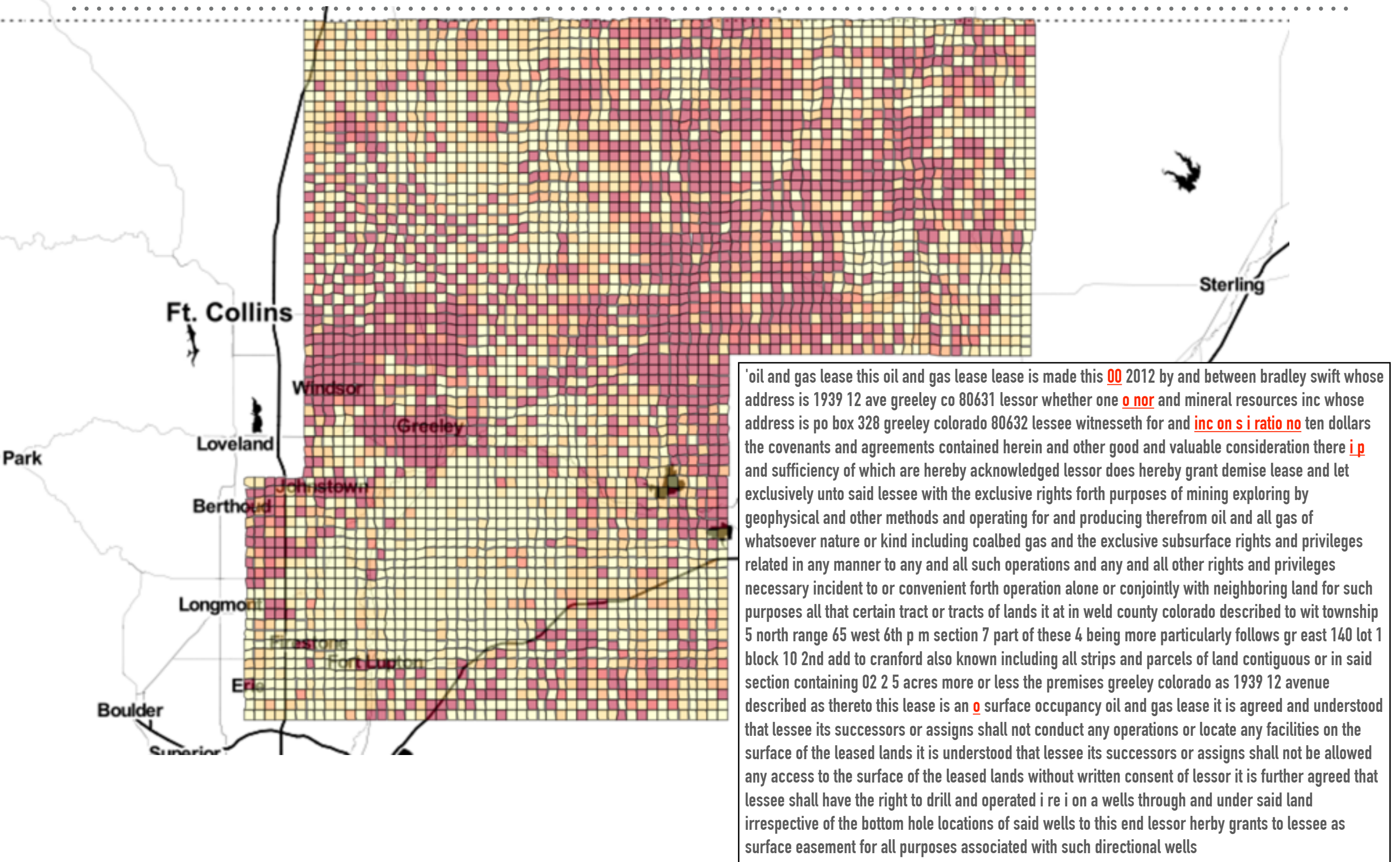
- *Letter successor variety*
- *entropy*
- *n-grams*



Regular Expression

`'[^\W_]+|(_|[_\W\s])+'`
`_(ツ)_`

RESULTS



FIN

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🐙 /estenssoros

in /estenssoros