



source:Scotte Santens

TEMPORARY ASSISTANCE FOR NEEDY FAMILIES

Text Mining: Final Project 5/29/2018

Shinya Takatani

QUICK REVIEW OF TANF

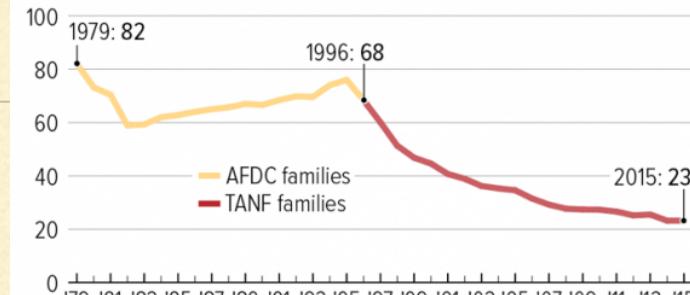
- one of federal assistance programs
 - started in 1997
 - the goal is to help needy families to work and care children self-sufficiently
 - block grants are given to state governments so that the program is designed and operated by themselves
-

CRITICISM

- decreased assistance, increased need
- # children under the poverty line increased
- used for other purposes
- benefit level, lifetime limit, eligibility requirements
- inequality among states

TANF's Role as a Safety Net Continues to Decline

Number of families receiving AFDC/TANF benefits for every 100 families with children in poverty

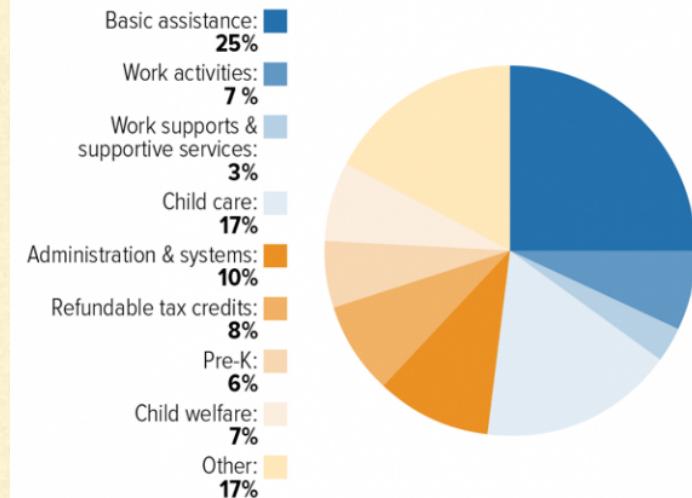


Note: TANF = Temporary Assistance for Needy Families, AFDC = Aid to Families with Dependent Children

Source: CBPP analysis of poverty data from the Census' Current Population Survey and AFDC/TANF caseload data from Department of Health and Human Services and (since September 2006) caseload data collected by CBPP from state agencies.

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How States Spent Federal and State TANF Funds in 2015



Note: TANF = Temporary Assistance for Needy Families.

Source: CBPP analysis of Department of Health and Human Services 2015 TANF financial data

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REDUCE THE BUDGET AND...

Trump Signs Order to Require Recipients of Federal Aid Programs to Work



The order that President Trump signed on Tuesday is directed at Medicaid and other low-income assistance programs across the government, but many of its changes are already underway. Doug Mills/The New York Times

By Glenn Thrush

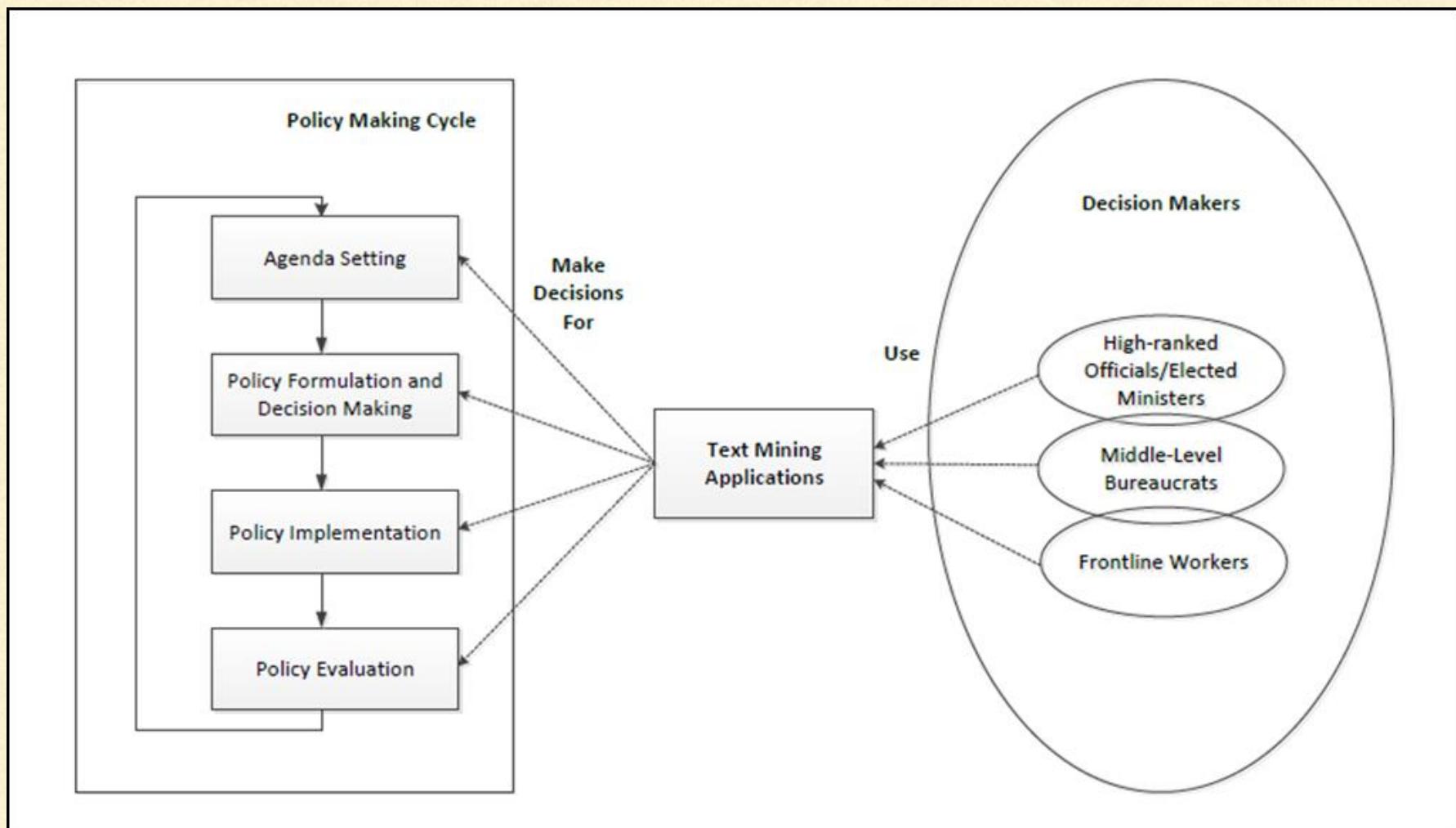
April 10, 2018



President Trump quietly signed a long-anticipated executive order on Tuesday intended to force low-income recipients of food assistance, Medicaid and low-income housing subsidies to join the work force or face the loss of their benefits.

The order, in the works since last year, has an ambitious title — “Reducing Poverty in America” — and is directed at “any program that provides means-tested assistance or other assistance that provides benefits to people, households or families that have low incomes,” according to the order’s text.

TEXT MINING IN PUBLIC POLICY



EXAMPLE OF APPLICATIONS

I. Agenda Setting

- gauging the attention and sentiment of stakeholders including the public
- SNS data → sentiment analysis

2. Policy Formulation and Decision Making

- summarize citizen opinions or analyze public understanding of the policy
- testimony files or questionnaire → visualization and summarization

3. Policy Implementation

- cut the project cost by automating the process
- application documents → automatic screening reply or the error detection

4. Policy Evaluation

- measure performance of programs
- feedback comments of participants or frontline workers

WORK FLOW OF MY PROJECT

I. Scraping dossiers

- focus on Maine/Kansas legislature

2. Overview of the corpus

- extract characteristics of words / documents by visualization

3. Predict of the positions

- train/test with documents of Kansas
- predict type of documents of Maine

4. Summarize each testimony on TANF

- try three methods and compare them

5. Principal Component Analysis

- clustering words into some topics with weights

I. SCRAPING DOSSIERS

Maine Legislature Committee Information

LD 33, SP0012 An Act To Adjust the Lifetime Limit for the Receipt of TANF Benefits - Sen. Eric Brakey of Androscoggin
Accepted Majority (ONTP) Report, 6/7/17
Reported Out - ONTP/OTP-AM, 5/17/17
Subjects: TEMPORARY ASSIST TO NEEDY FAMILIES, PROVISIONS, LIFETIME LIMIT ON BENEFITS
+ Testimony: 23 items.

LD 1419, HP0977 Resolve, Regarding Legislative Review of Portions of Chapter 101: MaineCare Benefits Manual, Chapter III, Section 29, Allowances for Support Services for Adults with Intellectual Disabilities or Autism Spectrum Disorder; a Late-filed Major Substantive Rule of the Department of Health and Human Services
Emergency Signed, 5/31/17
Emergency Finally Passed, 5/31/17
Reported Out - OTP, 5/17/17
Subjects: HEALTH AND HUMAN SERVICES DEPT,

related to TANF
in last five legs
18 bill docs
177 testimony docs

Kansas 2017-2018 Legislative Sessions

2015-2016 Biennium Information is available under the Historical tab.

HOUSE SENATE LEGISLATORS COMMITTEES BILLS & LAWS JOURNALS

May 29, 2018

House Status: Adjourned until Monday, January 14, 2019 at 02:00 p.m.
Senate Status: Adjourned until Monday, January 14, 2019 at 02:00 p.m.

you are here: Home » Committees » Health and Human Services

Health and Human Services

Meeting Day: Daily Time: 1:30 pm Location: 546-S

Room 546-S Audio Stream
Agendas / Minutes / Testimony
Committee Documents
2017 Action Index
2018 Action Index

Bills, Resolutions and Appointments

1 2 3 4 5

Sponsored Bills

SB51 - House Substitute for SB 51 by Committee on Health and Human Services - Scheduling of controlled substance analog and controlled substances.

SB52 - House Substitute for SB 52 by Committee on Health and Human Services - Filing and refilling prescriptions.

HB2025 - Assistant attorneys general for the board of nursing, reinstatement of revoked licenses and mental health technicians licensure.

HB2026 - Board of nursing reinstatement of revoked license.

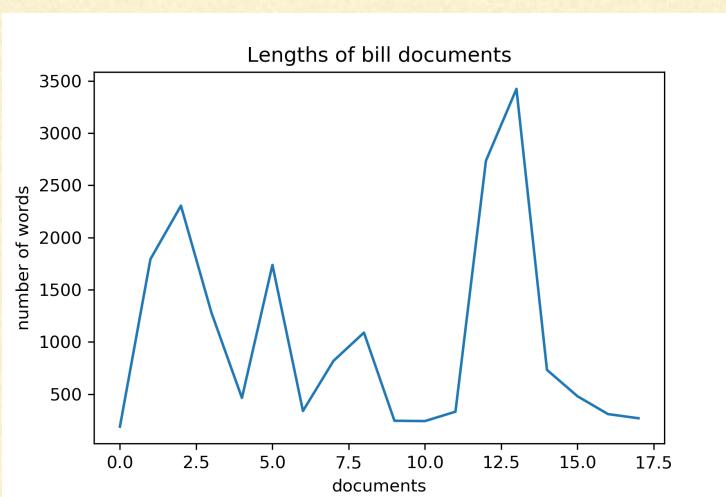
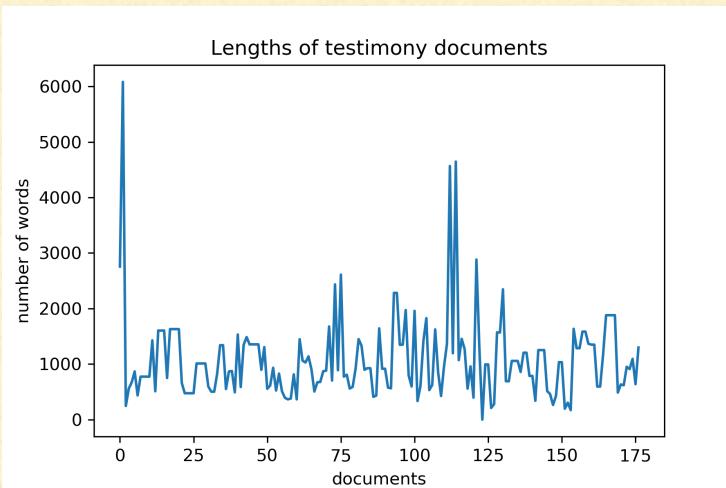
HB2027 - Healing arts concerning anatomic pathology billing.

with Proponent/ Opponent info
438 testimony docs

→ convert pdf to txt by pdftotext after downloading

2. OVERVIEW OF THE CORPUS

- the number of words in each document

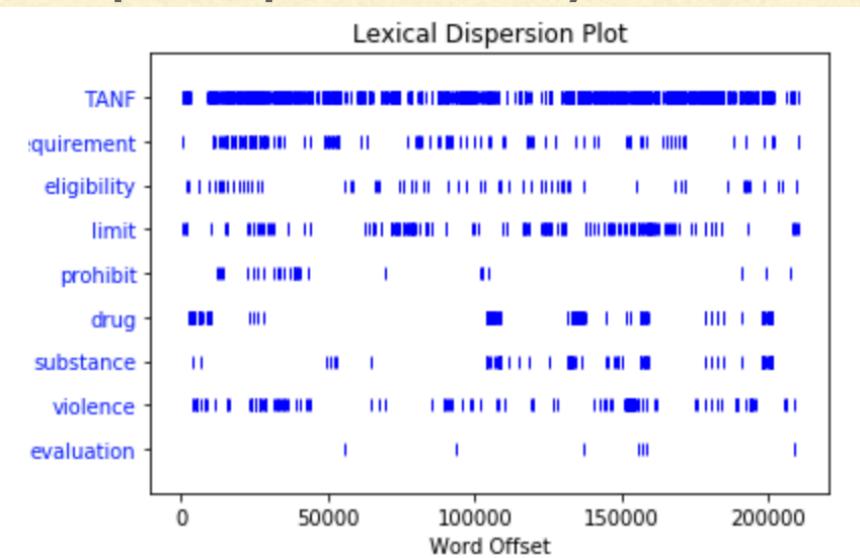


- extract summaries in bill documents

dic

{'SP0181': 'This bill creates a work search requirement for job - ready applicants to the Temporary Assistance for Needy Families program .',
'SP0136': 'This bill provides that a person who has exhausted the 60 - month lifetime limit on Temporary Assistance for Needy Families program benefits is ineligible to receive municipal general assistance program benefits .',
'SP0066': 'This bill provides that a person who has exhausted the 60 - month lifetime limit on Temporary Assistance for Needy Families program benefits is ineligible to receive municipal general assistance program benefits except that a person who has been ineligible to receive benefits under the Temporary Assistance for Needy Families program for 5 or more years may be considered eligible and a person who is in the process of seeking an extension of benefits under the Temporary Assistance for Needy Families program may be considered eligible .',
'SP0012': 'This bill changes the lifetime limit for receiving benefits through the Temporary Assistance for Needy Families program from 60 months to 36 months .',
'HP1324': 'This bill makes the following changes to the laws governing the Temporary Assistance for Needy Families program . 20 21 2 23 24 25 1 . It removes the provision that prohibits a person from being sanctioned under the Additional Support for People in Retraining and Employment - Temporary Assistance for Needy Families program or the Temporary Assistance for Needy Families program for failure to participate in the Additional Support for People in Retraining and EmploymentTemporary Assistance for Needy Families program if that failure to participate is based on good cause . 26 27 28 2 . It removes the 24 - month limit on education , training and treatment for participants in the Additional Support for People in Retraining and Employment - Temporary Assistance for Needy Families program . 29 3 . It eliminates the Parents as Scholars Program .',
'HP1317': "This bill requires the Department of Health and Human Services to report annually by February 15th to the joint standing committee of the Legislature having jurisdiction over health and human services matters and the joint standing committee of the Legislature having jurisdiction over financial affairs regarding actions taken by the department to investigate program integrity under the MaineCare , Temporary Assistance for Needy Families and food supplement programs , including the amount recovered , the cost of those investigations and prosecutions , the number of personnel working on the investigations , the status of cases referred to the Attorney General 's office , a description of the performance and activities of a vendor , contractor or other program integrity unit used by the department to help recover overpayments , a description of the department 's participation in federally mandated program integrity efforts , the results of federal audits , a description of defects , deficiencies or weaknesses in department systems , a description of planned investments in technology and a description of policy changes or improvements implemented .",
'HP1312': 'This bill prohibits benefits provided under the Temporary Assistance for Needy Families program from being expended on tobacco , imitation liquor , liquor , gambling , lotteries or bail .',

- dispersion plot in testimony documents



- **Word cloud of testimony documents**



3. PREDICT OF THE POSITIONS

```
all_words = nltk.FreqDist(w.lower() for w in documents_k.words()).most_common()

word_features = [w for (w, n) in all_words if w not in stopwords if len(w)>2][:200]

def document_features(document):
    document_words = set(document)
    features = {}
    for word in word_features:
        features['contains({})'.format(word)] = (word in document_words)
    return features

featuresets = [(document_features(d), c) for (d,c) in kansas_subset]
train_set, test_set = featuresets[25:], featuresets[:25]
classifier = nltk.NaiveBayesClassifier.train(train_set)

print(nltk.classify.accuracy(classifier, test_set))

0.88

classifier.show_most_informative_features(7)

Most Informative Features
contains(palliative) = True      False : True   = 5.6 : 1.0
contains(anesthesia) = True      False : True   = 4.6 : 1.0
contains(support) = False        False : True   = 3.9 : 1.0
contains(kancare) = True         False : True   = 3.3 : 1.0
contains(dentist) = True         True : False  = 3.0 : 1.0
contains(therapist) = True       True : False  = 3.0 : 1.0
contains(support) = True         True : False  = 2.9 : 1.0
```

Train Naive Bayes Classifier with the data of Kansas

X = if the document has 200 most frequent words
Y = Proponent(True) or Opponent(False) (binomial)

Test set = 25 (/279)

Apply it for the data of Maine

3. PREDICT OF THE POSITIONS

- 1088I



Maine Coalition to
End Domestic Violence

May 3, 2013

Good morning, Senator Craven, Representative Farnsworth and members of the committee,

My name is Margo Batsie and I am here representing the Maine Coalition to End Domestic Violence offering information to inform decision making LD 1443 An Act To Make Convicted Drug Felons Ineligible for TANF Assistance.

We question the wisdom of making a lifetime prohibition for access to benefits based on a one-time, non-violent crime. Domestic violence victims do sometimes resort to drug use to dull the pain of abuse. On occasion, they are caught up in the drug trafficking of an abuser, arrested, convicted and spend time in jail. Sometimes this results in a change of life, enforced separation from the abuser and on release, a new safer life. We would not want their access to the financial supports to sustain that new life stopped, as proposed in this legislation.

Hope is based on the expectation of positive change. What one does early in life may have no bearing on the person. If a person has become drug free and no longer engaged in criminal activity, what gain does society have in refusing them benefits due to the rest of us? This punitive action benefits no one—certainly not the person trying to turn their life around.

True:
Opponent

Predict:
Proponent

- 10882

**Testimony of the
Department of Health and Human Services**

Before the Joint Standing Committee on Health and Human Services

In Support of LD 1443
An Act to Make Convicted Drug Felons Ineligible for TANF Assistance

Submitted by the Department of Health and Human Services Pursuant to Joint Rule 204

Hearing Date: May 3, 2013

Senator Craven, Representative Farnsworth and Members of the Joint Standing Committee, I am Dale Denno, the Director for the Office for Family Independence. I am here today to speak in support of LD 1443 – An Act to Make Convicted Felons Ineligible for TANF Assistance.

LD 1443 proposes to deny eligibility under the Temporary Assistance for Needy Families (TANF) program for individuals who have been convicted of a felony drug offense after August 22, 1996. The LD also repeals the prior statutory language allowing the Department of Health and Human Services to administer drug tests to persons convicted of a drug-related felony, recognizing the legal and practical challenges raised by that approach. This proposal allows the Department to conform its practices to federal law, and to implement a practical and cost-effective solution to prevent public assistance monies from being allocated to drug felons.

In 1996, the U.S. Congress passed the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA). Part of that legislation prohibited individuals who had been convicted of drug felonies from obtaining TANF benefits. Maine has not, until now, aligned its rules to that standard. This proposal would synchronize Maine standards with federal rules.

LD 1443 recognizes the commonly-held belief that public financial assistance should not be provided to individuals who have been convicted of serious drug crimes. The long-term viability of any program of public assistance depends on the broad support of the body politic. The taxpayers of the States do not begrudge providing TANF benefits for the family whose breadwinner has lost their job, or become disabled, or has otherwise suffered financial disaster through no fault of their own—these misfortunes can happen to anyone. But for individuals who have chosen to engage in criminal behavior involving drugs—most typically drug trafficking—there is no parallel public support for the disposition of public resources.

True:
Proponent

Predict:
Proponent

→ depend on the existence of “support”?

4. SUMMARIZE EACH TESTIMONY ON TANF

I. Extractive summarization

- choose an important subset of the sentences in the original text

2. Abstractive summarization

- interpret and examine the text using advanced natural language techniques

I.1 topic representation

- Topic (frequent) words, TFIDF, Latent Dirichlet Allocation

I.2 Indicator representation

- having certain words, position in the document, length of sentences

4. SUMMARIZE EACH TESTIMONY ON TANF

- **10881**

May 3, 2013

Good morning, Senator Craven, Representative Farnsworth and members of the committee,

My name is Margo Batsie and I am here representing the Maine Coalition to End Domestic Violence offering information to inform decision making LD 1443 An Act To Make Convicted Drug Felons Ineligible for TANF Assistance.

We question the wisdom of making a lifetime prohibition for access to benefits based on a one-time, non-violent crime. Domestic violence victims do sometimes resort to drug use to dull the pain of abuse. On occasion, they are caught up in the drug trafficking of an abuser, arrested, convicted and spend time in jail. Sometimes this results in a change of life, enforced separation from the abuser and on release, a new safer life. We would not want their access to the financial supports to sustain that new life stopped, as proposed in this legislation.

Hope is based on the expectation of positive change. What one does early in life may have no bearing on the person. If a person has become drug free and no longer engaged in criminal activity, what gain does society have in refusing them benefits due to the rest of us? This punitive action benefits no one—certainly not the person trying to turn their life around.

1st model:

Sent = documents.sents(fileid)

Score = sum(word freq in the document)

+sum(word freq in the bill documents)/18 for each sentence

Summary of 10881.pdf.txt in testimony on TANF:

May 3 , 2013 Good morning , Senator Craven , Representative Farnsworth and members of the committee , (sentence number: 2 , score: 60.666666666666664)

On occasion , they are caught up in the drug trafficking of an abuser , arrested , convicted and spend time in jail . (sentence number: 13 , score: 67.1111111111111)

2nd model:

Sent = nltk.sent_tokenize(documents.raw(i).replace('\n', ' '))

Score = same as above

Summary of 10881.pdf.txt in testimony on TANF:

MCE Maine Coalition to End Domestic Violence May 3, 2013 Good morning, Senator Craven, Representative Farnsworth and members of the committee, My name is Margo Batsie and I am here representing the Maine Coalition to End Domestic Violence offering information to inform decision making LD 1443 An Act To Make Convicted Drug Felons Ineligible for TANF Assistance. (sentence number: 0 , score: 138.5)
On occasion, they are caught up in the drug trafficking of an abuser, arrested, convicted and spend time in jail. (sentence number: 3 , score: 67.1111111111111)

3rd model:

Sent = same as above

Score = sum(word tfidf in the document) for each sentence

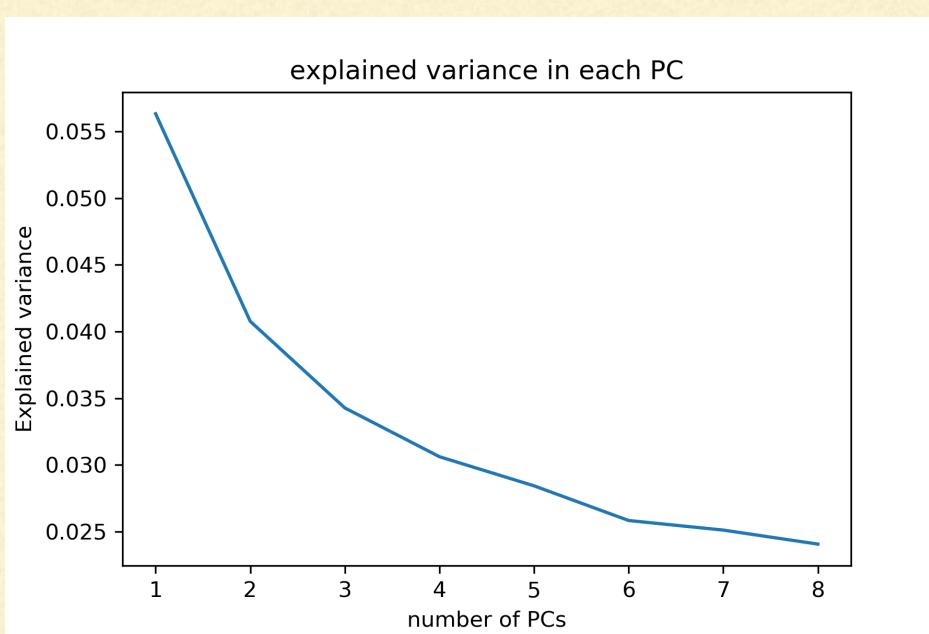
Summary of 10881.pdf.txt in testimony on TANF:

MCE Maine Coalition to End Domestic Violence May 3, 2013 Good morning, Senator Craven, Representative Farnsworth and members of the committee, My name is Margo Batsie and I am here representing the Maine Coalition to End Domestic Violence offering information to inform decision making LD 1443 An Act To Make Convicted Drug Felons Ineligible for TANF Assistance. (sentence number: 0 , score: 9.52826760439)

We question the wisdom of making a lifetime prohibition for access to benefits based on a one-time, non-violent crime. (sentence number: 1 , score: 9.52826760439)

5. PRINCIPAL COMPONENT ANALYSIS

create topic vectors with PCA from testimony documents



- **Cosine similarity (k=3)**

	10762	10880	10881	10882	10883	16070
10762	1.000	0.531	0.387	0.727	0.472	-0.278
10880	0.531	1.000	0.863	0.117	-0.496	-0.677
10881	0.387	0.863	1.000	0.340	-0.501	-0.227
10882	0.727	0.117	0.340	1.000	0.622	0.440
10883	0.472	-0.496	-0.501	0.622	1.000	0.418
16070	-0.278	-0.677	-0.227	0.440	0.418	1.000

- **PCA topic vectors (k=3)**

drugs	0.295900	offering	0.354143	lgf	0.231542
offering	0.270913	entire	0.282921	checks	0.207125
entire	0.129186	track	0.197417	executives	0.160663
brunswick	0.104185	disability-related	0.192764	_xjg	0.152851
square	0.104185	_xjg	0.165400	longperiods	0.138081
month	0.103954	result	0.145653	0ry	0.128219
paving	0.099111	h1epowerofsocicr	0.143785	due	0.098624
track	0.095154	struggled	0.133537	jcomart@mejp.org	0.085213
disability-related	0.087257	aspects	0.127249	hisjob	0.085092
initial	0.079361	oftheir	0.126662	circuit	0.081275
homes	0.066933	initial	0.116523	2001	0.079514
struggled	0.065071	burdened	0.115803	increased	0.079290
h1epowerofsocicr	0.064636	experiments	0.094424	conceit	0.077351
focus	0.063636	fundamentally	0.092366	ibuprofen	0.074218
aspects	0.063472	unavailable	0.087157	estimated	0.073301
Name: topic0, dtype: float64		Name: topic1, dtype: float64		Name: topic2, dtype: float64	

CONCLUSION AND LIMITATIONS

- I depict a comprehensive picture to apply text mining for public policy, and analyze corpora of legislature documents, using a lot of techniques which we learnt in this class.
 - Some of them are useful, but others are not because there are some limitations.
 - Limitations: few documents(time-consuming, dispersed file sources, image-like pdf files), lost or added information at conversion to text
 - Huge potential of further research: much room to improve summarization algorithm, finding change of issues or policy needs with more clean (time-series) data
-