



PROJECT

CLASSIFICATION OF POLITICAL TEXTS BY NICK BIRNBERG

DATE

26/5/15

MENTOR

PIERRE NUGUES

Learn Congress

Predicting Votes

Establishing Positions

Analyzing Bills



[HTTP://CONGRESS.BITOFNICK.COM](http://congress.bitofnick.com)

```
data.json UNREGISTERED
data.json
184   "enacted": false,
185   "vetoed": false
186 },
187 "introduced_at": "2013-01-22",
188 "number": "3",
189 "official_title": "A bill to improve education and provide all students in the United States wit
190 "popular_title": null,
191 "related_bills": [],
192 "short_title": "Strengthen our Schools and Students Act",
193 "sponsor": {
194   "district": null,
195   "name": "Reid, Harry",
196   "state": "NV",
197   "thomas_id": "00952",
198   "title": "Sen",
199   "type": "person"
200 },
201 "status": "REFERRED",
202 "status_at": "2013-01-22",
203 "subjects": [
204   "Child safety and welfare",
205   "Education",
206   "Education programs funding",
207   "Elementary and secondary education",
208   "Higher education",
209   "Preschool education",
210   "Science and engineering education",
211   "Student aid and college costs",
212   "Teaching, teachers, curricula"
213 ],
214 "subjects_top_term": "Education",
215 "summary": {
216   "as": "Introduced",
217   "date": "2013-01-22",
218   "text": "Strengthen our Schools and Students Act - Expresses the sense of the Senate that Cong
219 },
220 "titles": [
221   {
222     "as": "introduced",
223     "is_for_portion": false,
224     "title": "Strengthen our Schools and Students Act",
225     "type": "short"
226   },
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228     "as": "introduced",
229     "is_for_portion": false,
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Line 192, Column 61 Spaces: 2 JSON

Data Collection

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Extracting Features

- * bag of words
- * tf-idf



Classifier: Multinomial Naive Bayes

- * bag of words assumption
- * assumption of independence between every pair of features
- * can be used with a small amount of training data

Architecture

- * Front-End:
 - * node.js + React + Flux + Bootstrap
 - * JustGage
- * Back-End:
 - * Python (Flask + Natural Language Toolkit + scikit-learn)

RESULTS AND APPLICATION

