PGMO IRSDI project
Opinion and argumentation on the electric vehicle
in the French national debates corpora

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NLP for debates

• Open Government Partnership, 2014, encourages citizen consultations
• Yellow Vests crisis, 2019 → 3 online platforms for debate
  • Grand Débat National (GDN)
  • Vrai Débat (VD)
  • Entendre la France (ELF)

→ Large corpus available for opinion and argumentation
→ Many political topics
Data and tasks

26,314 unique contributions mentioning "electric vehicle"

Tasks

- Data annotation
- Opinion mining (Naive Bayes / Embeddings)
- Filter electric vehicle topic
- Detection of argumentative structures (Rasa NLU)
- Key points identification in the arguments
- Visualisation and website
Manual annotation task

- Opinion: 2,500 tagged contributions

Results for a Naive Bayes Classifier trained on the annotated set of contributions:

<table>
<thead>
<tr>
<th></th>
<th>Train</th>
<th>Test</th>
<th>Precision</th>
<th>Recall</th>
<th>F-mesure</th>
<th>$\mu$ F-mesure</th>
</tr>
</thead>
<tbody>
<tr>
<td>for</td>
<td>300</td>
<td>250</td>
<td>0.57</td>
<td>0.1</td>
<td>0.18</td>
<td>0.58</td>
</tr>
<tr>
<td>against</td>
<td>230</td>
<td>30</td>
<td>0.05</td>
<td>0.03</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>neutral</td>
<td>691</td>
<td>400</td>
<td>0.60</td>
<td>0.92</td>
<td>0.72</td>
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</tr>
</tbody>
</table>
Results for argumentative structure detection

Machine learning for annotation

- Rasa NLU (DIET)
  - Intention: opinion
  - Entities: arguments

- Global performance (micro, fscore): 32%
Arguments clustering
• Great collaboration ERTIM / EDF
• Debates are very interesting NLP data!
• Automatic argument detection is challenging...
• We managed to produce an analysis / report
• We have many perspectives

Thank you!