



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

Damien Nouvel, Johanna Cordova

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

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

Classification for opinion mining

Manual annotation task

- Opinion : 2,500 tagged contributions

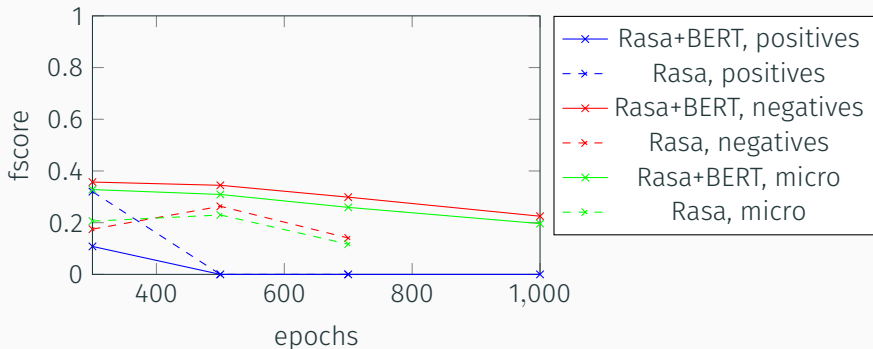
Results for a **Naive Bayes Classifier** trained on the annotated set of contributions:

	Train	Test	Precision	Recall	F-measure	μ F-measure
for	300	250	0,57	0,1	0,18	0,58
against	230	30	0,05	0,03	0,04	
neutral	691	400	0,60	0,92	0,72	

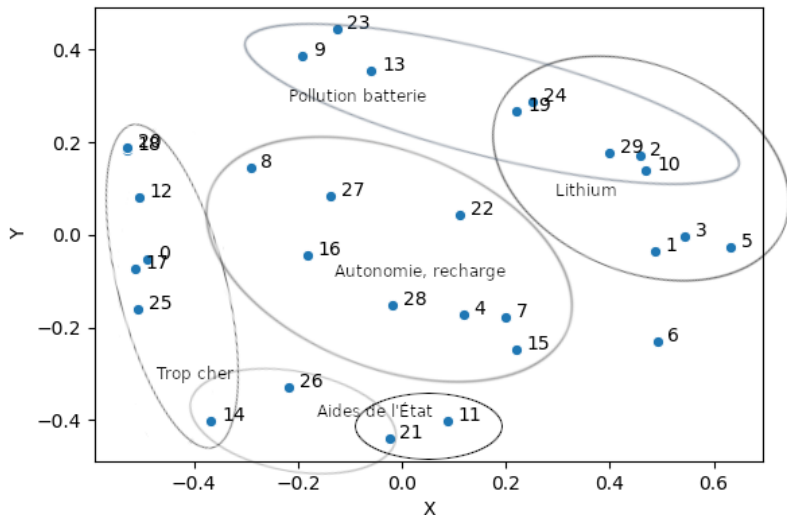
Results for argumentative structure detection

Machine learning for annotation

- Rasa NLU (DIET)
 - Intention : opinion
 - Entities : arguments
- Global performance (micro, fscore) : 32%



Arguments clustering



Conclusion

- 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!