GenderedNews

Developers : AGUIAR Mathilde - HAJJI Oumaima - SIDIBE Rokiatou dite Rose

Project owners : RICHARD Ange - PORTET François - BASTIN Gilles

Plan :

I. A reminder of the project
II. Old state of the projet
III. Technical contributions
IV. Project management
V. Conclusion

The Team

Mathilde Aguiar

Head of projet

Oumaima Hajji

SCRUM Master

Rokiatou dite Rose Sidibe

Developer

Context and subject

Context

Time allowed for women in medias is still unequal compared to men, lack of women representation in the medias.

Subject

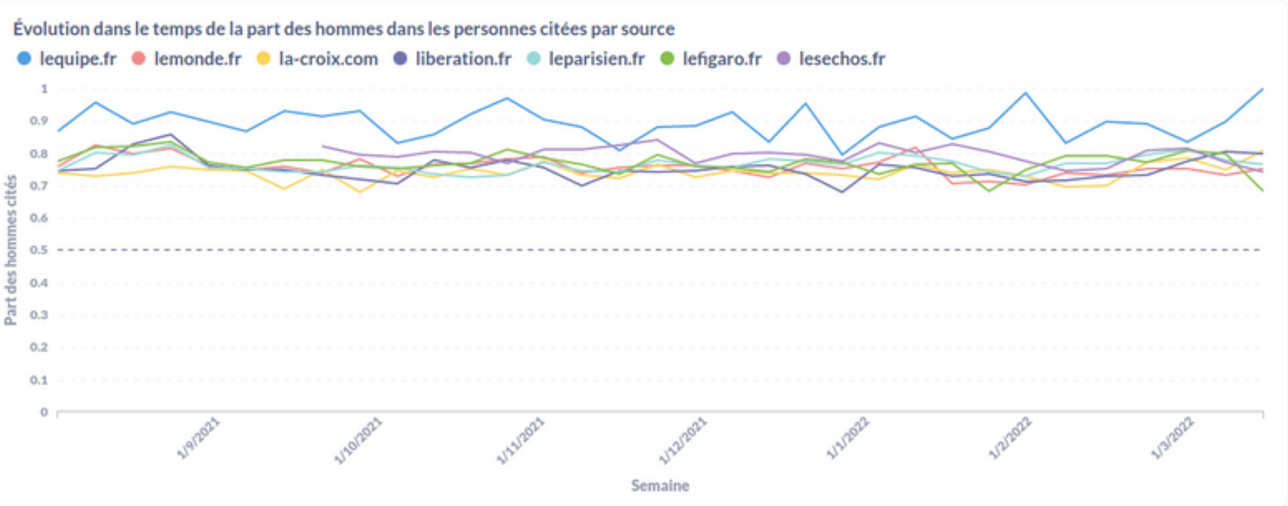
GenderedNews : a Web site that collects masculinity rates calculated from French written medias.

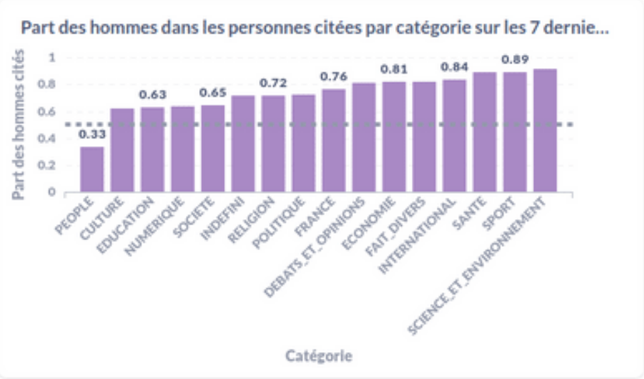
Goals

Replace the old Metabase graphs and work on the natural language processing scripts.

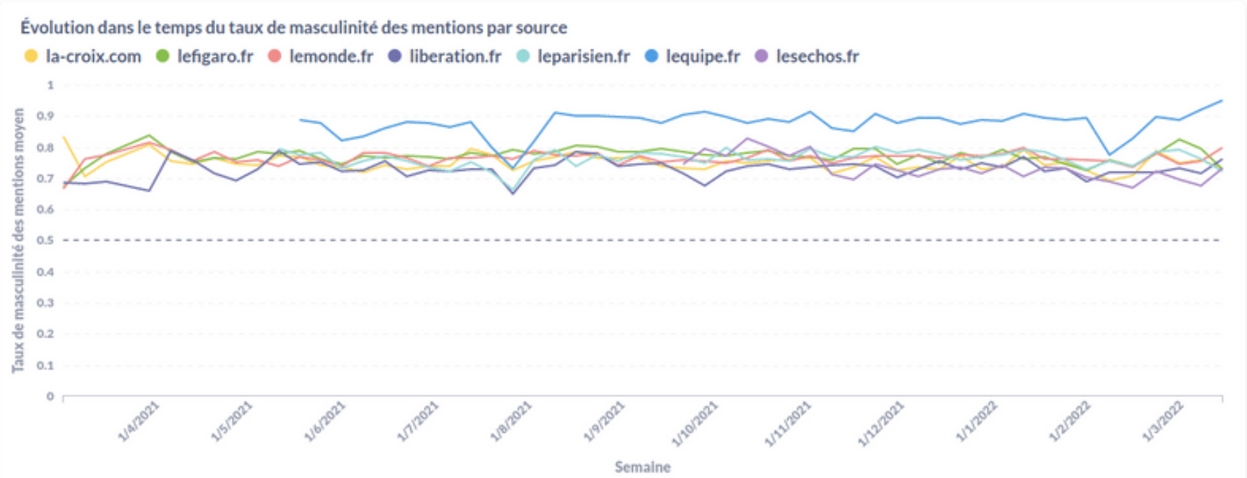
Current website

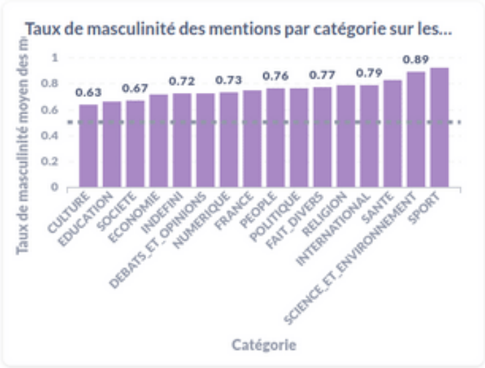
Mentions





Quotes





Mention versus Quote

Mentions

The number of times the name of a person is used by an other person/journalist within the article

Quotes

The sayings reported, most often by a journalist, that concern a person. They could be written within double quotes (") or introduced by certain expressions such as: "according to, by, etc."

Specifiactions

Replace de Metabase graphs	Metabase suffers from a limitation in sources that we can add.
Use NER to target masculine/feminine names	Ambiguities persists between names of people and homonyms name of locations.
Add new media sources	Limitation of the number of sources exploited.

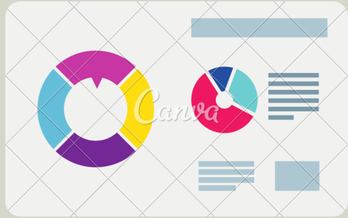
Technologies used

Databases

Mongodb, SQLite

TALN

SpaCy (NER pipelines), docanno



Data vizualisation

Apache Superset, Metabase

Programming languages

Python, SQL

Collaborative tools

Trello

Kanban

Gitlab

Google colab -
test the NER scripts

doccano

Data Annotator

CI/CD : already displayed in the gitlab repo

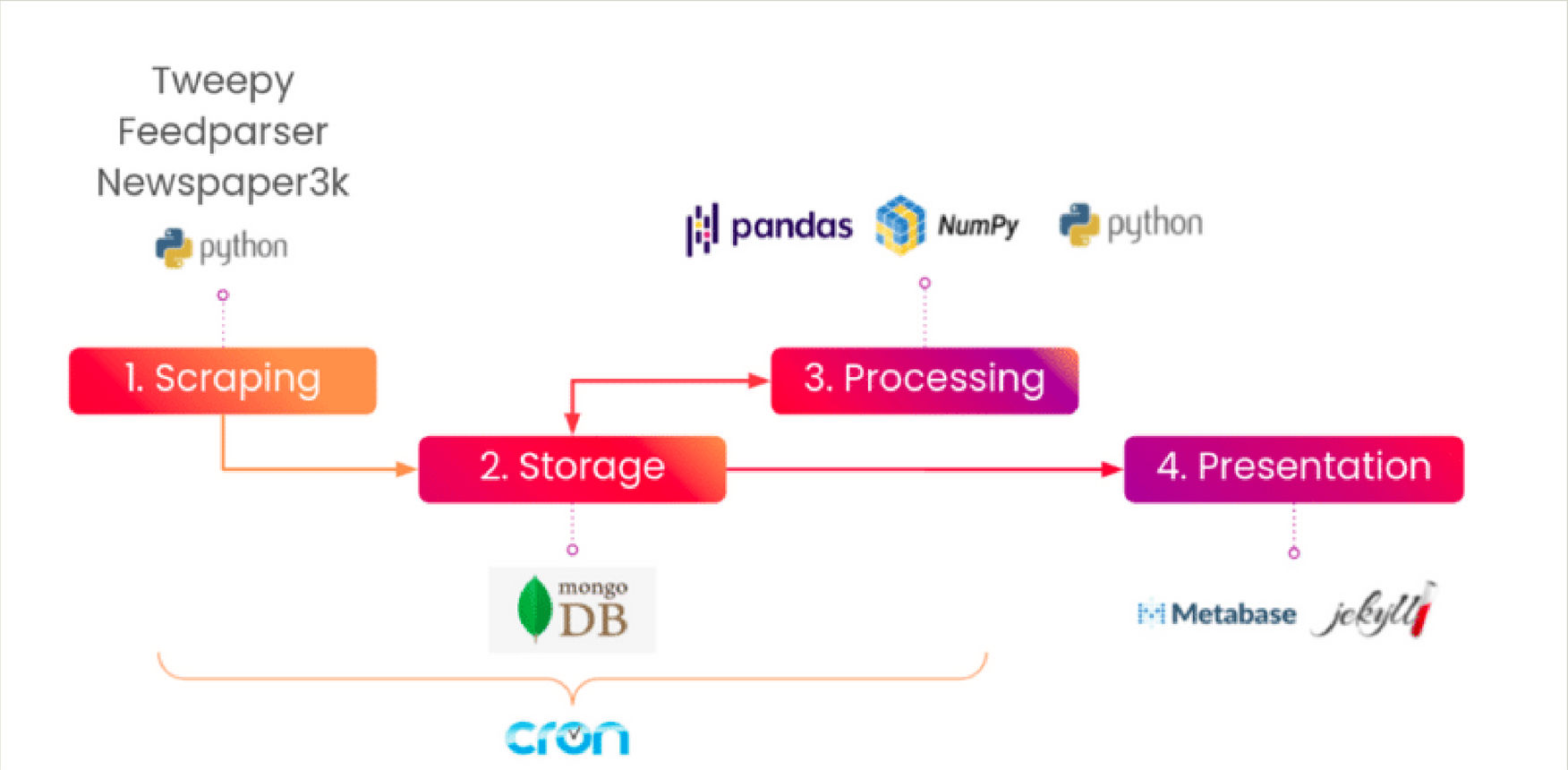
Tasks done

1. Migrating from Metabase to Superset to produce new charts
2. Adding new media sources
3. Implementing NER scripts

I Technology migration: Metabase to Apache Superset

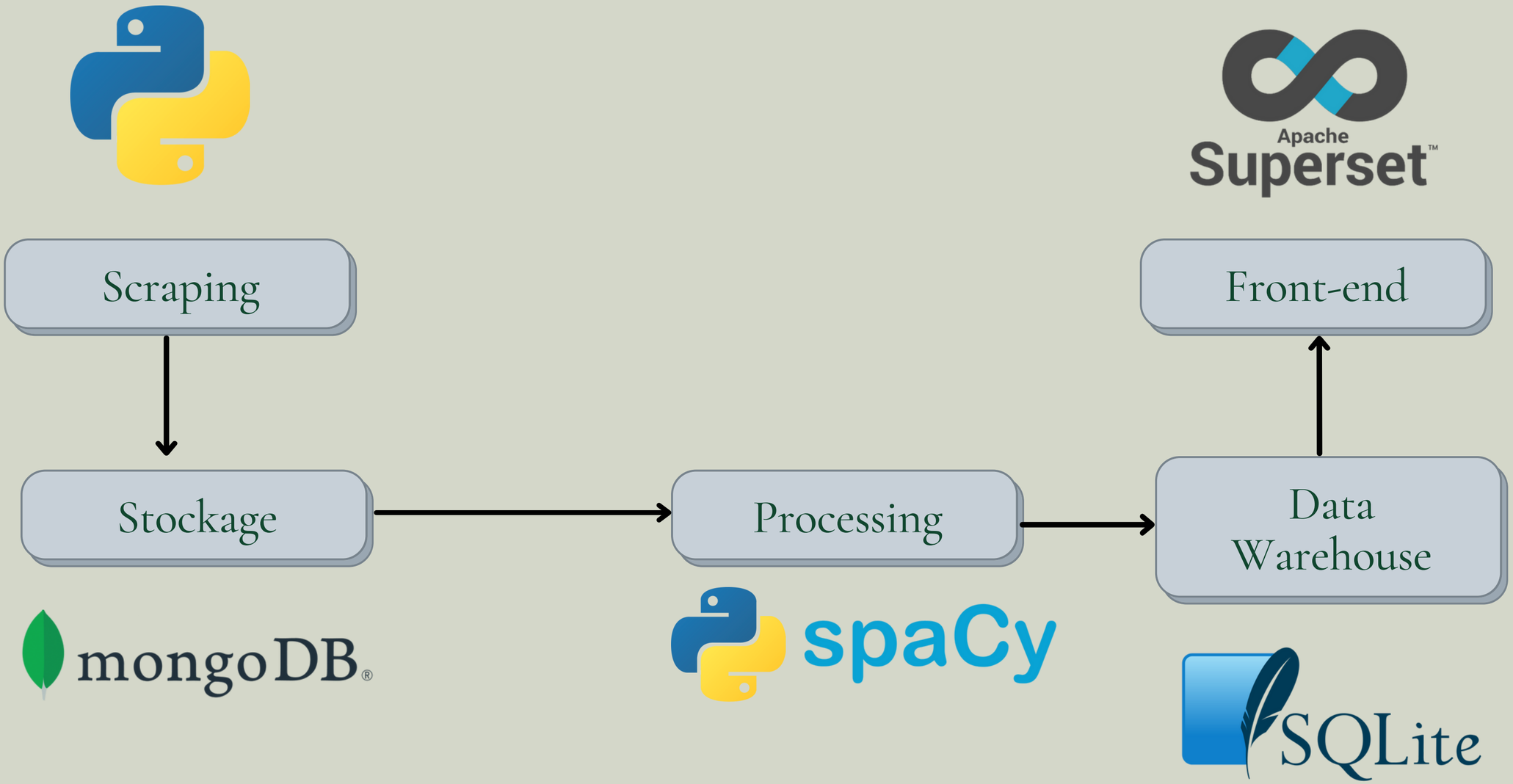
1. The creation of an intermediate SQLite Database
2. The implementation of the link between SQLite and Mongodb
3. The creation of coherant graphs on Apache Superset

Old Architecture

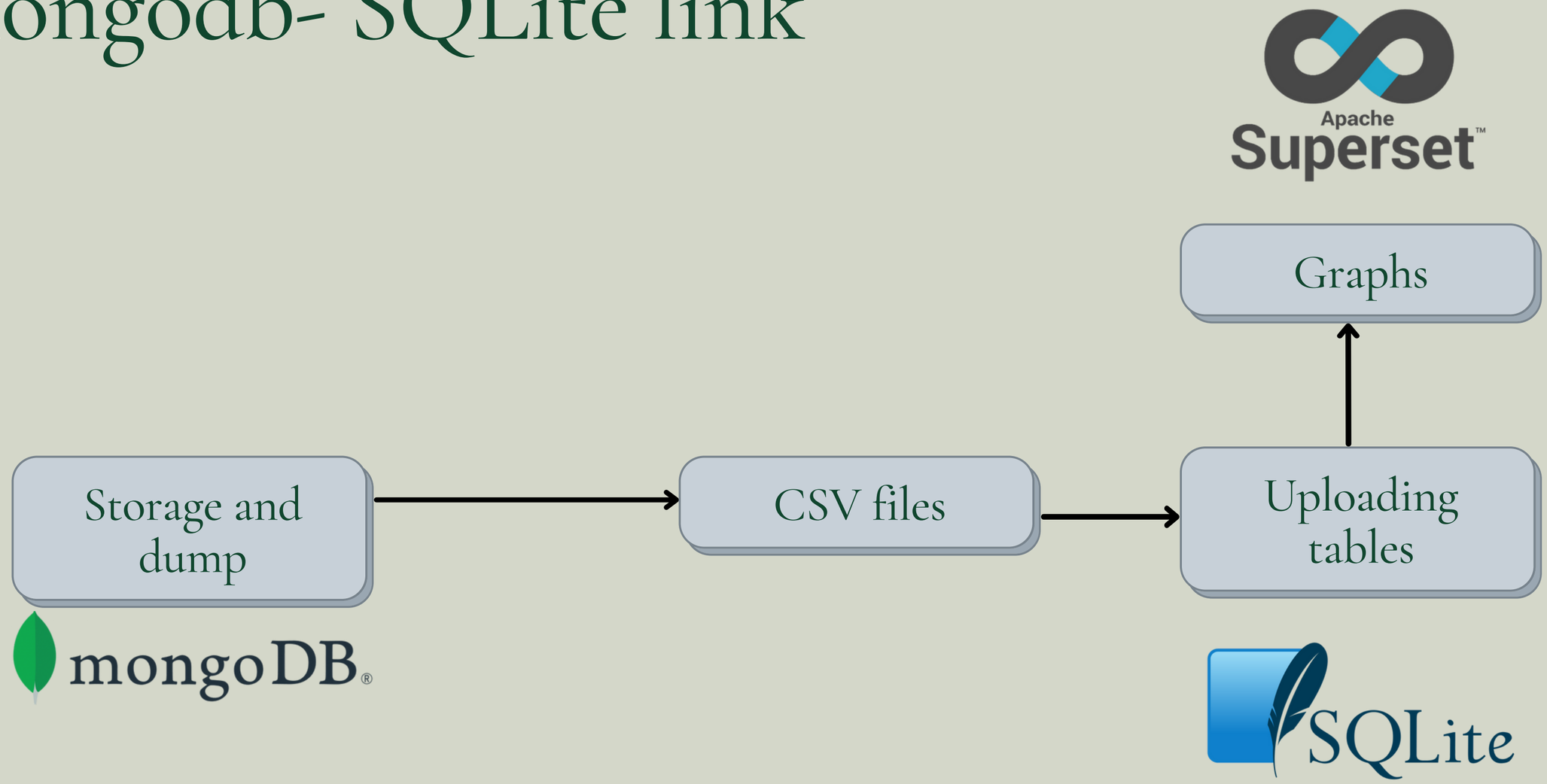


New Architecture

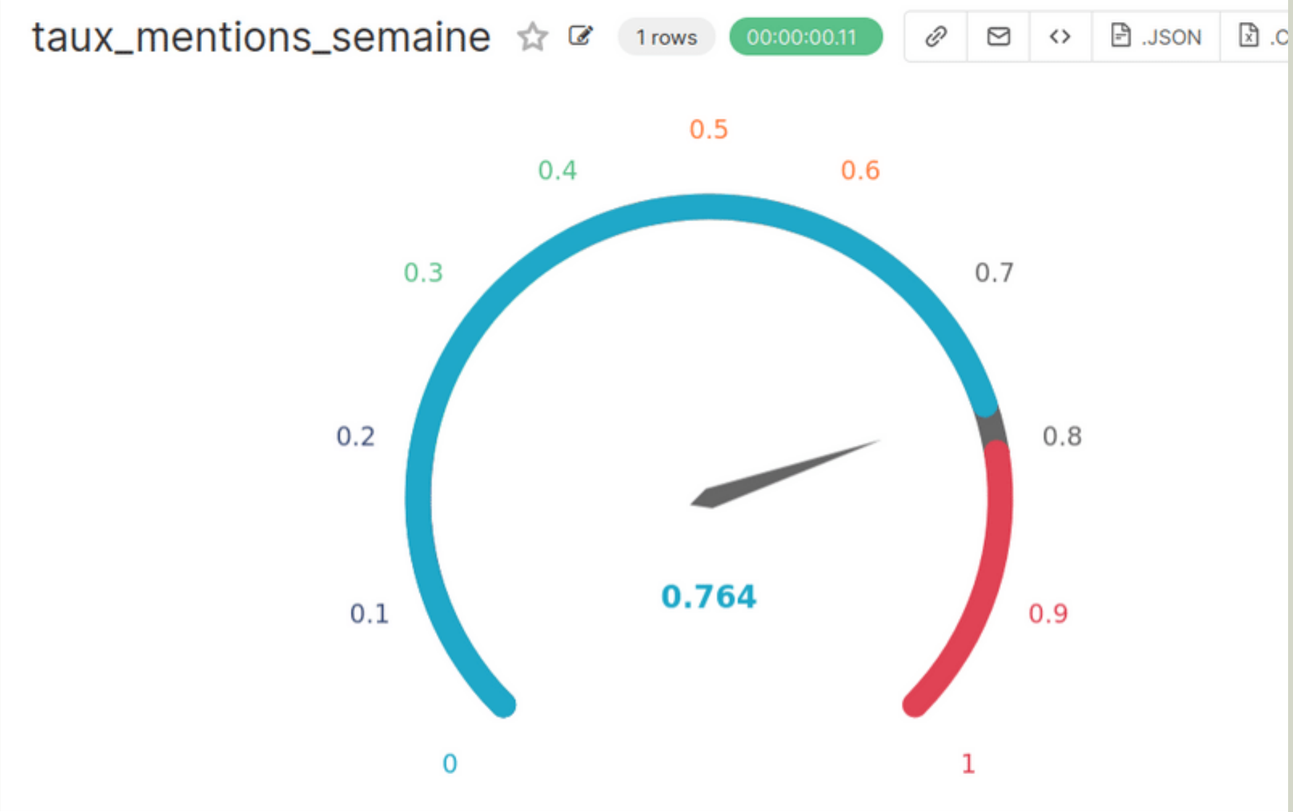
Tweepy
Feedparser
Newspaper3k

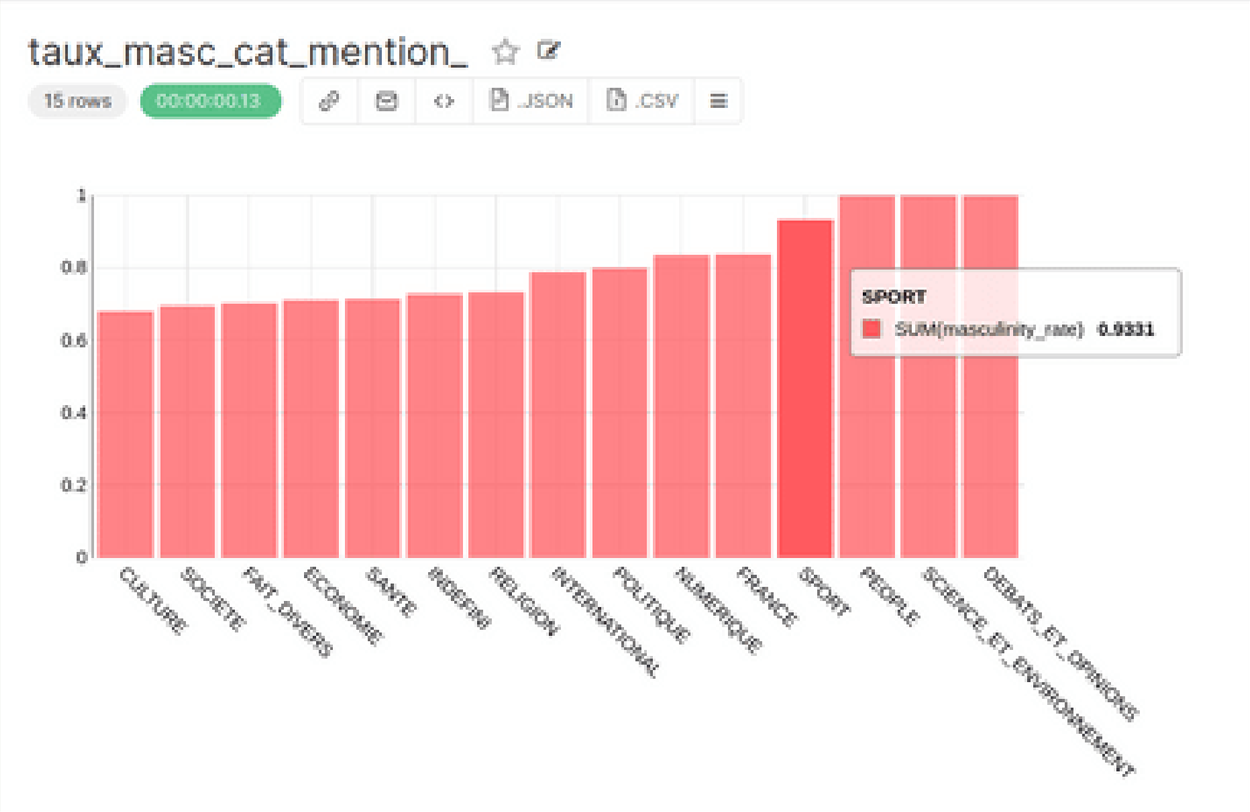


Mongodb- SQLite link



Example of charts done in Superset





2 Adding new media sources

1 Adding 16 new media sources

2 Recensement of the main categories of each source by browsing their websites

3 Implementation of an observation script to keep track of the real categories of the articles

Added sources

20minutes.fr
Actu.fr
France Inter
France24.fr
Franceinfo.fr
L'Express
L'Humanité
L'Opinion
La Voix du Nord
Le Dauphine Libéré
Le Monde Diplomatique
Le Point
Le Télégramme
Marianne
Ouest France
Sud Ouest

3 Implementation of the NER scripts

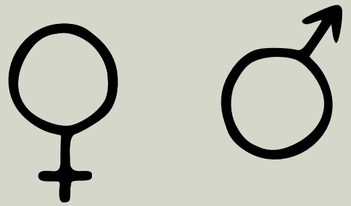
1 Test of multiple existing NER models

2 Experimental approach to explore different trails

3 Evaluation of the performance of the algorithm

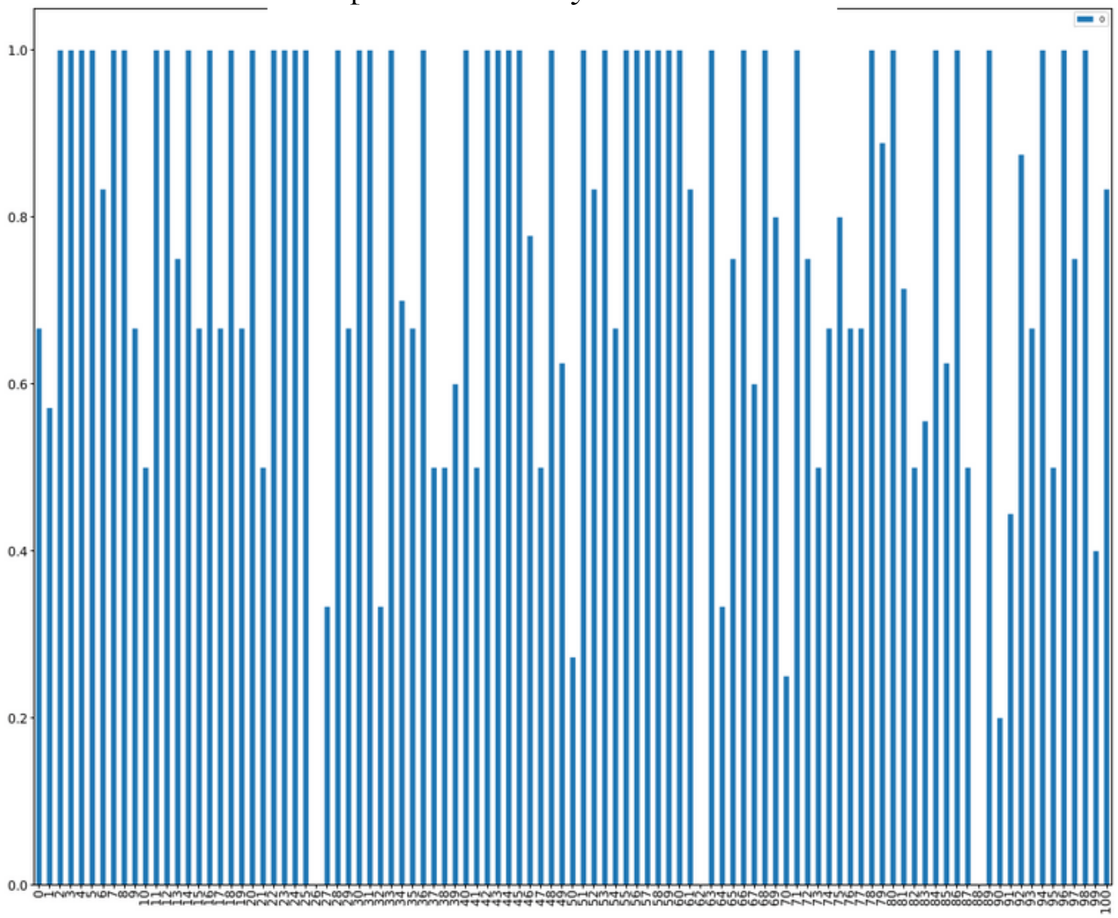
NLP Approach

Spacy NER modèle → Filtering the entities: we keep only PER → Retrieving the gender of the name



Performances

performance by document



total performance for all the documents:
~0.772

{ 0: [],

1: [('alexis', 'Homme')],

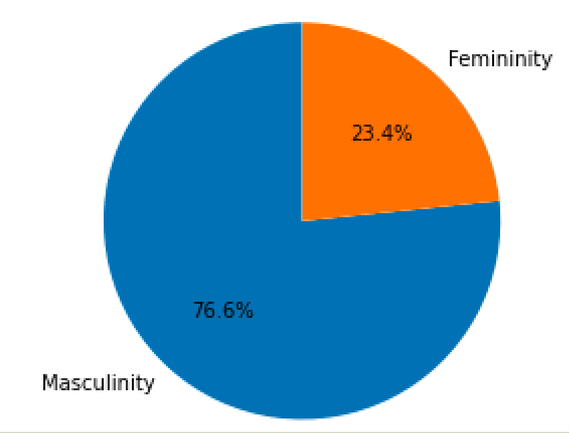
2: [('claude', 'Homme')],

3: [('maxine', 'Femme'), ('maxime', 'Homme')],

4: [('frédérique', 'Femme')],

5: [('sacha', 'Homme')],

6: [('jackie', 'Homme')]}



The error femme -> homme: 0

The error homme -> femme: 1

The error femme -> epicene: 0

The error homme -> epicene: 11

here are the names with the error (label_in_docanno, label_in_algo)

{'sameh': ('Homme', 'Epicene'), 'george': ('Homme', 'Epicene'), 'dany': ('Homme', 'Epicene'), 'billy': ('Epicene', 'Homme'), 'alex': ('Epicene', 'Homme'), 'harmony': ('Homme', 'Femme')}

Project management

Kanban

Definition of the tasks by the SCRUM Master and displaying them in the trello Kanban to track their progression.

Weekly meetings

Weekly meeting with the project owners to exchange about the current tasks and convey ideas.

Trello | Espaces de travail | Récent | Favoris | Modèles | Créer

Tableau | **GenderedNews** | GenderedNews | Visible par l'espace de travail | MA | Rejoindre le tableau | Power-ups

Oumaima

- faire la migration vers SQLite/Postgre
- tuto superset
- tester dataset sur les données genderednews
- Comprendre la lib Spacy et le NER (cf mail)
- lire le papier nlp
- regarder comment on fait l'algo nlp

+ Ajouter une carte

Rose

- Résoudre le problème du front local
- tester les autres sources
- Tester l'algo des captures de prénoms déjà existant
- Calculs de perfs des scripts Doc Anno
- Tester le site "doc Anno"

+ Ajouter une carte

Mathilde

- faire la migration vers SQLite/Postgre
- Deploy la version actuelle en local du site
- Faire l'UML de la BD SQLite
- Algo avec Spacy

+ Ajouter une carte

Priorité

- Comprendre la lib Spacy et le NER (cf mail)
- Faire marcher la page web test
- Faire un algo pour déterminer si un nom est propre ou commun/ éliminer les confusions
- Calculs de perfs entre les différents algo
- Faire un modèle complet
- Faire des tests utilisateurs

+ Ajouter une carte

Done

- Trouver une alternative à Metabase - production d'une doc
- Comprendre les scripts Doc Anno
- Regarder le link entre MongoDB
- Ajouter une ressource de la liste des journaux
- Tester les scripts examples (test ttes ensemble lundi)
- Créer un exemple avec Apache Superset
- Lire la doc sur git
- Lire la doc sur git
- Ajouter une ressource de la liste des journaux

+ Ajouter une carte

Metrics

Project length : 6 weeks

Added code lines : ~2500

Mathilde

- Commits : 9
- Tasks : 15

Oumaima

- Commits : 9
- Tasks : 9

Rose

- Commits : 10
- Tasks : 10

Demonstration

https://genderednews-apache.herokuapp.com/superset/welcome/
https://genderednews.herokuapp.com/

Conclusion

- The discovery of new technologies (Spacy, Mongodb, ...)
- The participation to a useful and enriching project
- The Exploration of an important subject (Gender Inequality

Thank you for listening !