Wine Reviews - FEUP

U.PORTO

FEUP FACULDADE DE ENGENHARIA
UNIVERSIDADE DO PORTO

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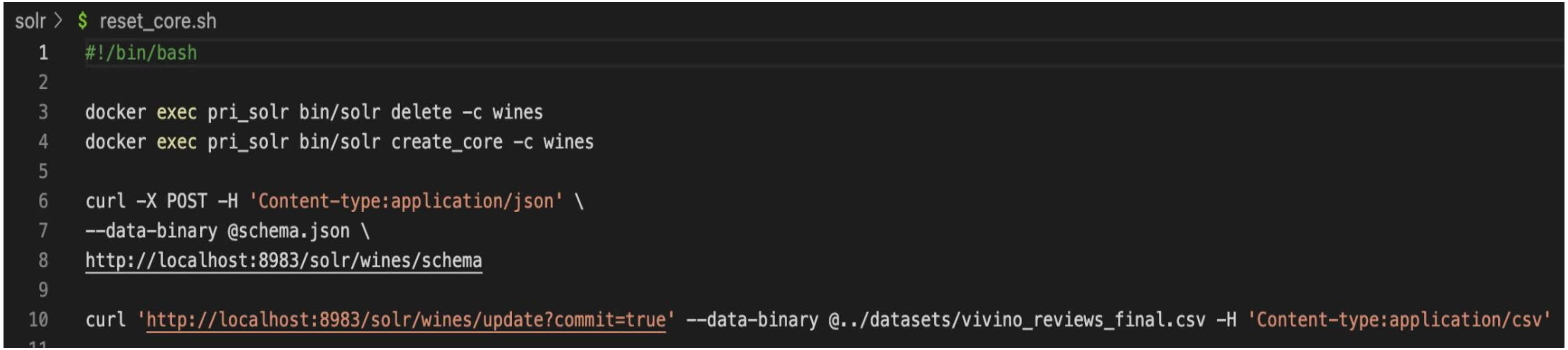
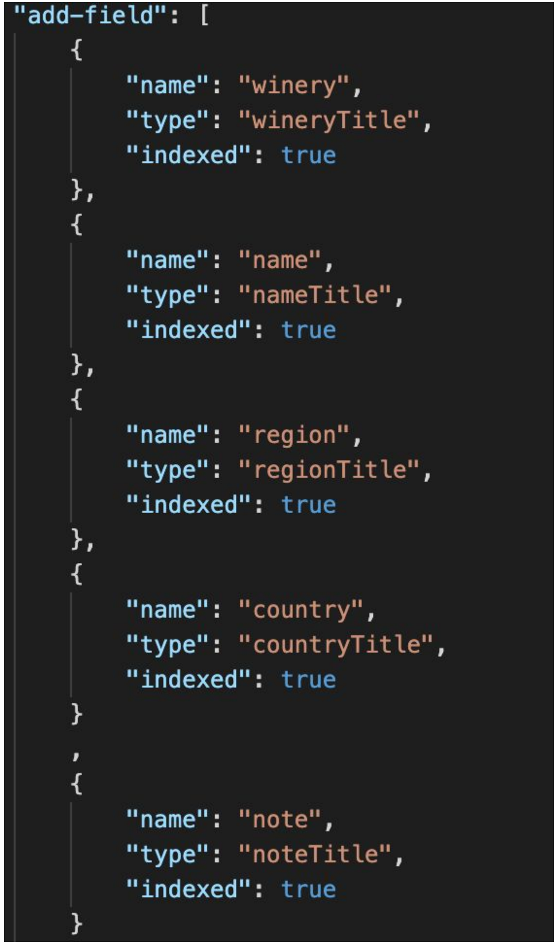
Information Indexing



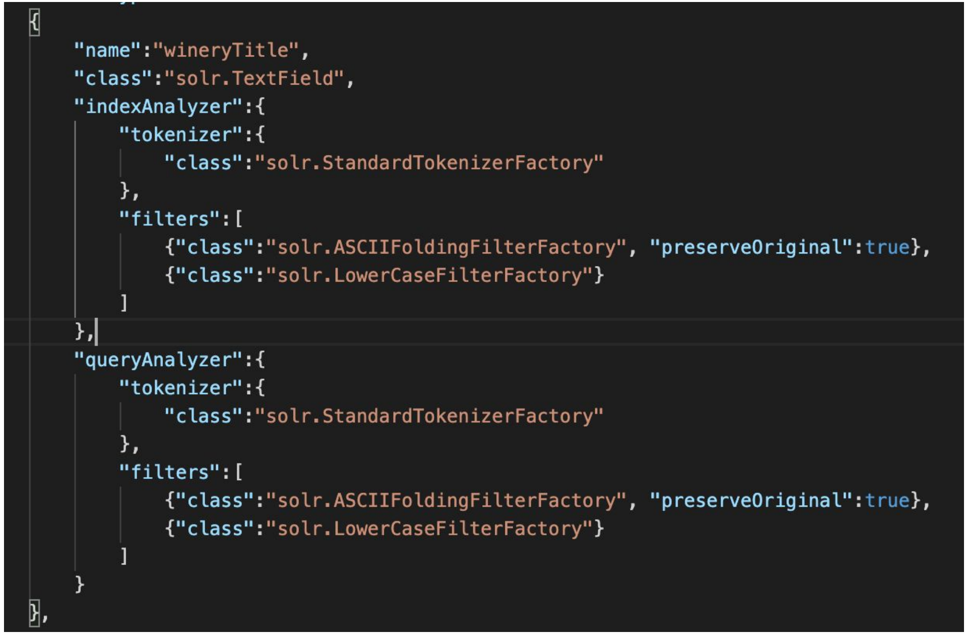
```
#!/bin/bash

docker exec pri_solr bin/solr delete -c wines
docker exec pri_solr bin/solr create_core -c wines

curl -X POST -H 'Content-type:application/json' \
--data-binary @schema.json \
http://localhost:8983/solr/wines/schema

curl 'http://localhost:8983/solr/wines/update?commit=true' --data-binary @../datasets/vivino_reviews_final.csv -H 'Content-type:application/csv'
```

- Delete old Core;
- Create new Core;
- Curl the schema to index;
- Curl the data to index;

Information Indexing

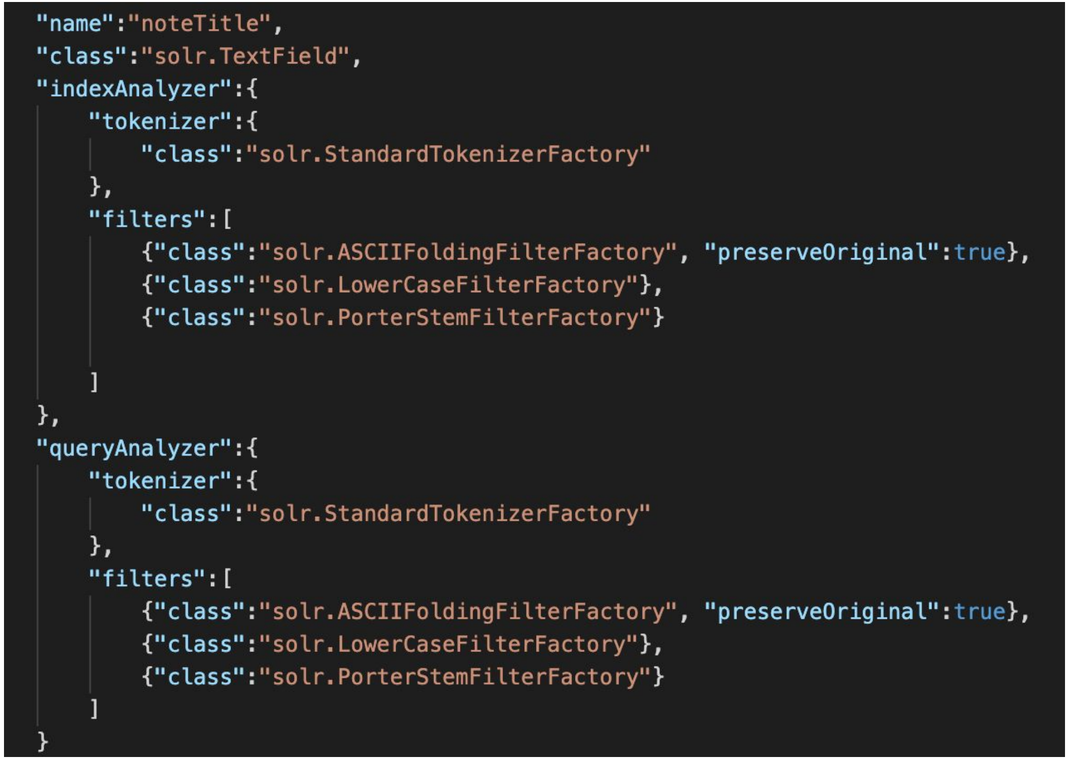


```
"add-field": [
    {
        "name": "winery",
        "type": "wineryTitle",
        "indexed": true
    },
    {
        "name": "name",
        "type": "nameTitle",
        "indexed": true
    },
    {
        "name": "region",
        "type": "regionTitle",
        "indexed": true
    },
    {
        "name": "country",
        "type": "countryTitle",
        "indexed": true
    }
    ,
    {
        "name": "note",
        "type": "noteTitle",
        "indexed": true
    }
```



```
{
    "name":"wineryTitle",
    "class":"solr.TextField",
    "indexAnalyzer":{
        "tokenizer":{
            "class":"solr.StandardTokenizerFactory"
        },
        "filters":[
            {"class":"solr.ASCIIFoldingFilterFactory", "preserveOriginal":true},
            {"class":"solr.LowerCaseFilterFactory"}
        ]
    },
    "queryAnalyzer":{
        "tokenizer":{
            "class":"solr.StandardTokenizerFactory"
        },
        "filters":[
            {"class":"solr.ASCIIFoldingFilterFactory", "preserveOriginal":true},
            {"class":"solr.LowerCaseFilterFactory"}
        ]
    }
},
```

Information Indexing



```
"name":"noteTitle",
"class":"solr.TextField",
"indexAnalyzer":{
    "tokenizer":{
        "class":"solr.StandardTokenizerFactory"
    },
    "filters":[
        {"class":"solr.ASCIIFoldingFilterFactory", "preserveOriginal":true},
        {"class":"solr.LowerCaseFilterFactory"},
        {"class":"solr.PorterStemFilterFactory"}

    ]
},
"queryAnalyzer":{
    "tokenizer":{
        "class":"solr.StandardTokenizerFactory"
    },
    "filters":[
        {"class":"solr.ASCIIFoldingFilterFactory", "preserveOriginal":true},
        {"class":"solr.LowerCaseFilterFactory"},
        {"class":"solr.PorterStemFilterFactory"}
    ]
}
```

Information Retrieval

Need: Find a wine with a good value for money.

Possible Query: note:”value” AND note:”money”

➔ Can this produce the type of results we want?

➔ It’s acceptable, although we don’t insure value and money are related in the search

➔ Is this a good and acceptable result?

Result: 303 wines found in 1600 available

Information Retrieval

Need: Find a wine with a good value for money.

Possible Enhanced Query: note:”value money”~5 (Proximity Search)

- ➔ Will this produce the type of results we want?
- ➔ It’s better, although we don’t insure a sentence like “value for money sucks” isn’t present
- ➔ Any way to improve?

Result: 243 wines found in 1600 available

Information Retrieval

Need: Find a wine with a good value for money.

Possible Enhanced Query: note:”good value money”~5 (Proximity Search)

- ➔ Now we have a nice collection of valid results
- ➔ Could also try with adjectives like *“great”, “excellent”, “fantastic”*

Result: 143 wines found in 1600 available (aprox: 160 bad suggestions filtered)

Information Needs and Evaluation

As to test we created 4 examples of situations where our search engine would be useful. Using Solr we tested base queries with bas on our examples and compared them to enhanced queries of the same examples.

“I’m looking for a wine with a taste of green apples” - Users will often want to find wines that have a certain specific taste.

“I’m searching for a wine that goes well with a chicken meal” - Users will often want to find wines that are a great match to the food they are having.

“I'm quite full and I'm looking for a light wine for the afternoon” - Users will often want to find a wine with a specific weight, suited for a drink at a specific time of day.

Information Needs

Need: Wine that goes well with a chicken meal.

Possible Query: note:”chicken”

➔ Basic search for chicken

➔ Still very generic, no real information about the relation between the chicken and the wine

Result: 100 wines found in 1600 available

Information Needs

Need: Wine that goes well with a chicken meal.

Possible Enhanced Query: note:"good chicken"~2 OR note:"great chicken"~2^5 OR note:"perfect chicken"~4^50 OR note:"excellent chicken"~4^50

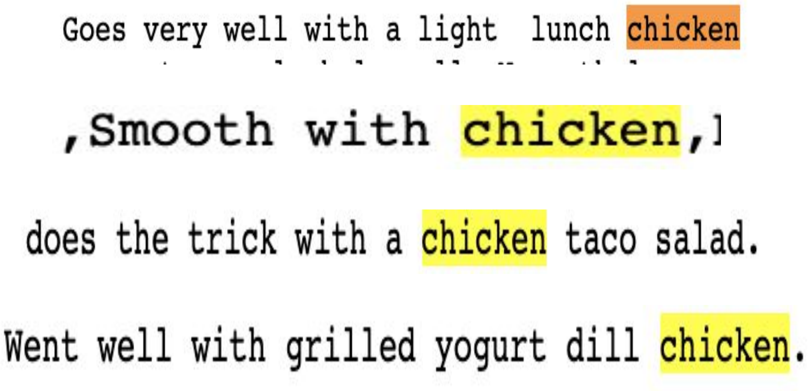
➔ Much more precise search. We look for proximity between chicken and a positive adjective with variable term boosting.

Result: 15 wines found in 1600 available(aprox: 85 results removed)

Information Needs

Need: Wine that goes well with a chicken meal.

Basic Query



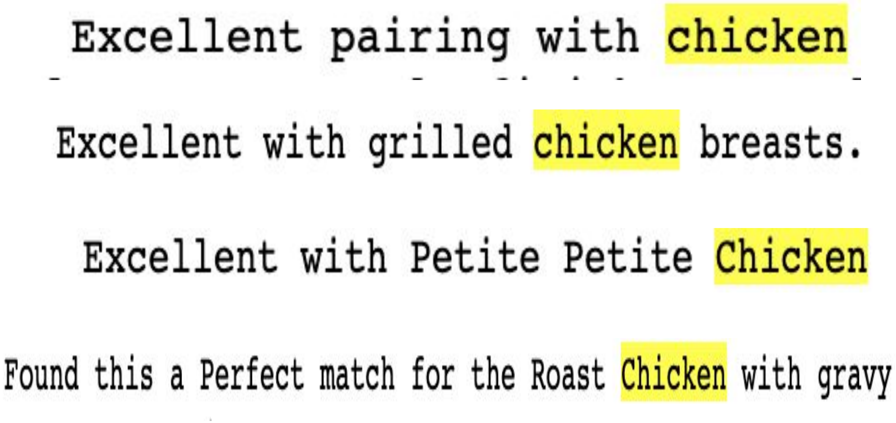
Goes very well with a light lunch chicken

,Smooth with chicken,

does the trick with a chicken taco salad.

Went well with grilled yogurt dill chicken.

Enhanced Query



Excellent pairing with chicken

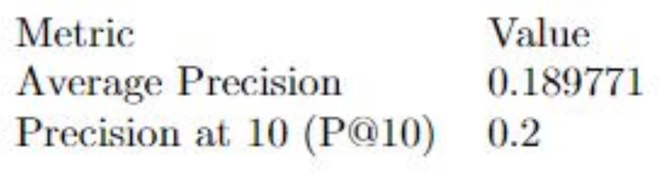
Excellent with grilled chicken breasts.

Excellent with Petite Petite Chicken

Found this a Perfect match for the Roast Chicken with gravy

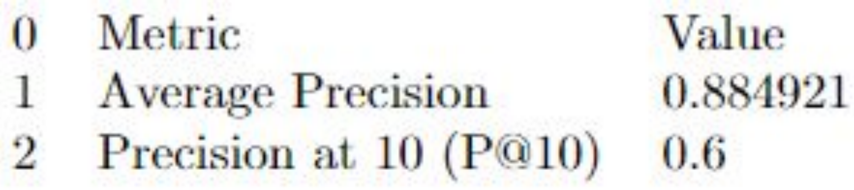
Taste Query

Base Query:



Metric	Value
Average Precision	0.189771
Precision at 10 (P@10)	0.2

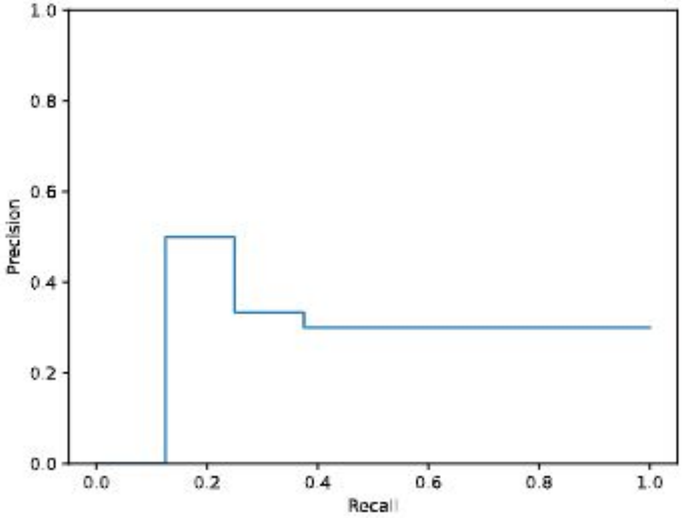
Enhanced Query:



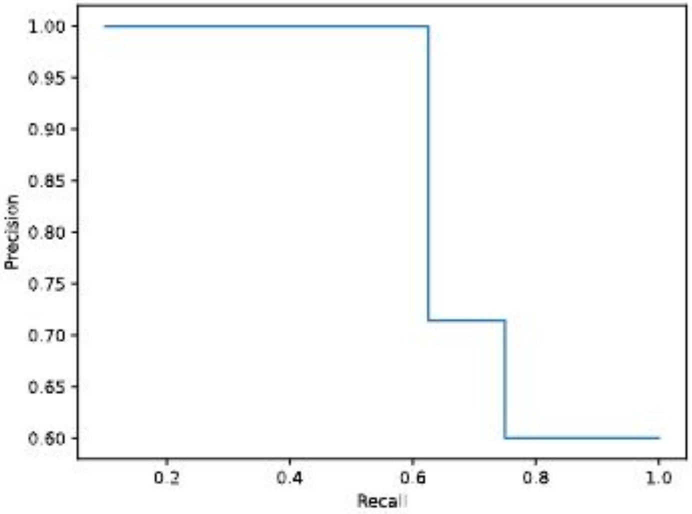
0	Metric	Value
1	Average Precision	0.884921
2	Precision at 10 (P@10)	0.6

Taste Query Cont.

Base Query:



Enhanced Query:



THE END