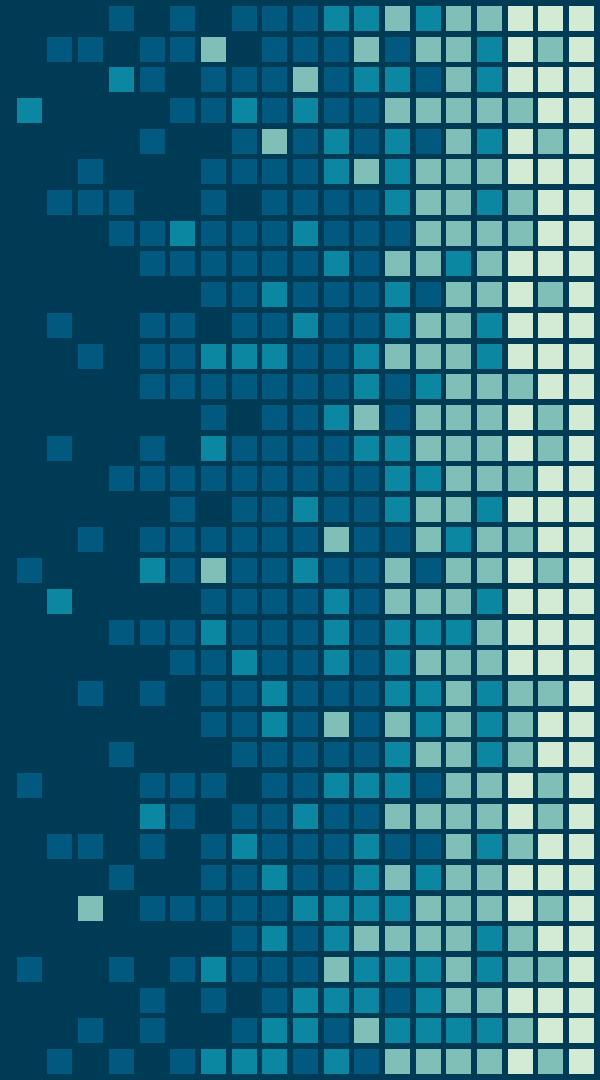


PhD thesis of
Raphaël Gazzotti
CIFRE SynchroNext I3S



Historic

- March 2016 - Start of Raphael's thesis
- Work on Allianz customer service
- March 2017 - On-going work named entities recognition and ontologies population (MIREL project)
- May 2017 - Start of HealthPredict project



Allianz customer service

Natural Language Processing

Problem description

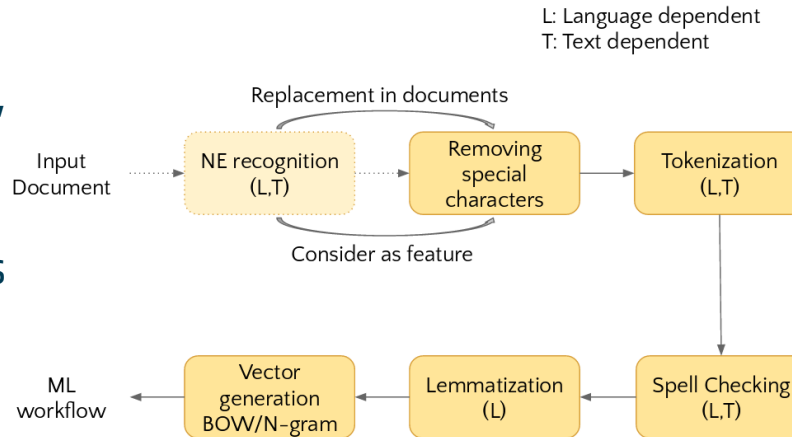
Short texts on a specific field,
in French

Feature generation

Use of extended bag-of-words
representations

Privacy / Security concerns

No use of external API



Machine Learning

Problem description

Multilabel imbalanced problem

Small dataset

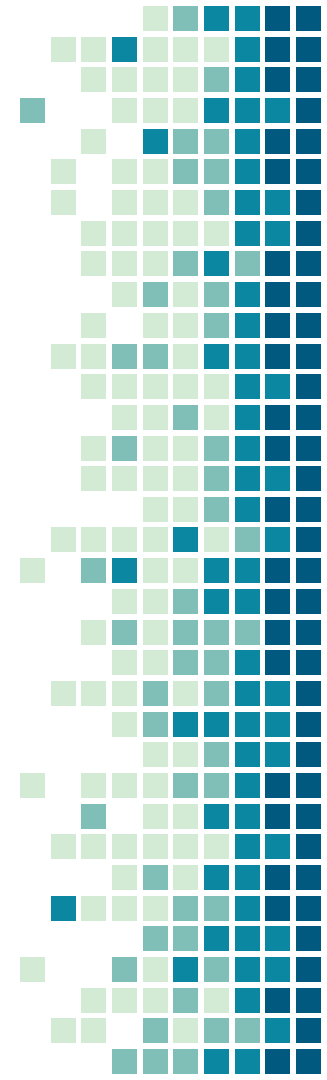
Feature engineering

Feature reduction / Feature relevance

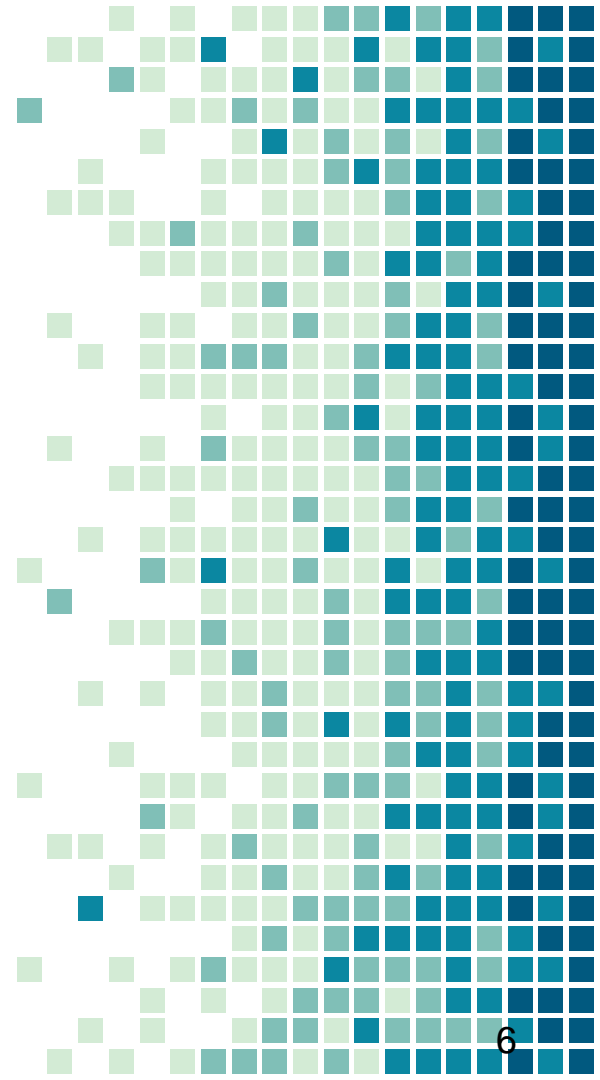
Supervised approach

Bayesian optimizations: selection of best classifiers and hyperparameters

Ensemble classifiers (on-going work)

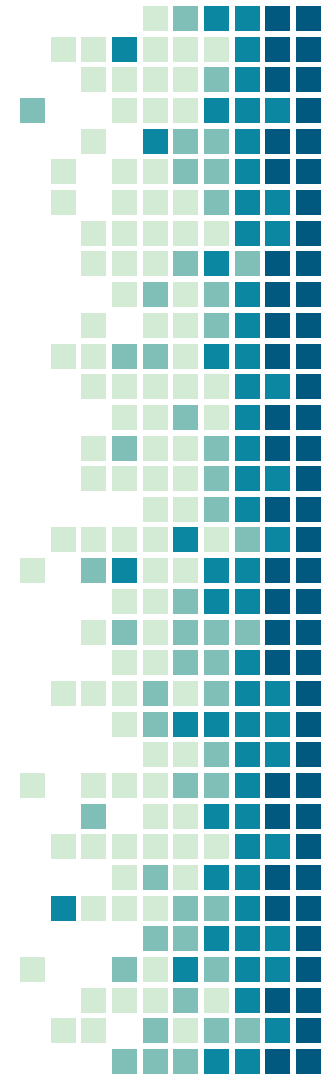


HealthPredict



HealthPredict goals

- Preventive medicine
 - Predict hospitalization of a patient
 - Determine variables which can impact prediction results
- Health Monitoring
 - Real-time statistics



THANKS!

Any questions?

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