



PROCE EUS

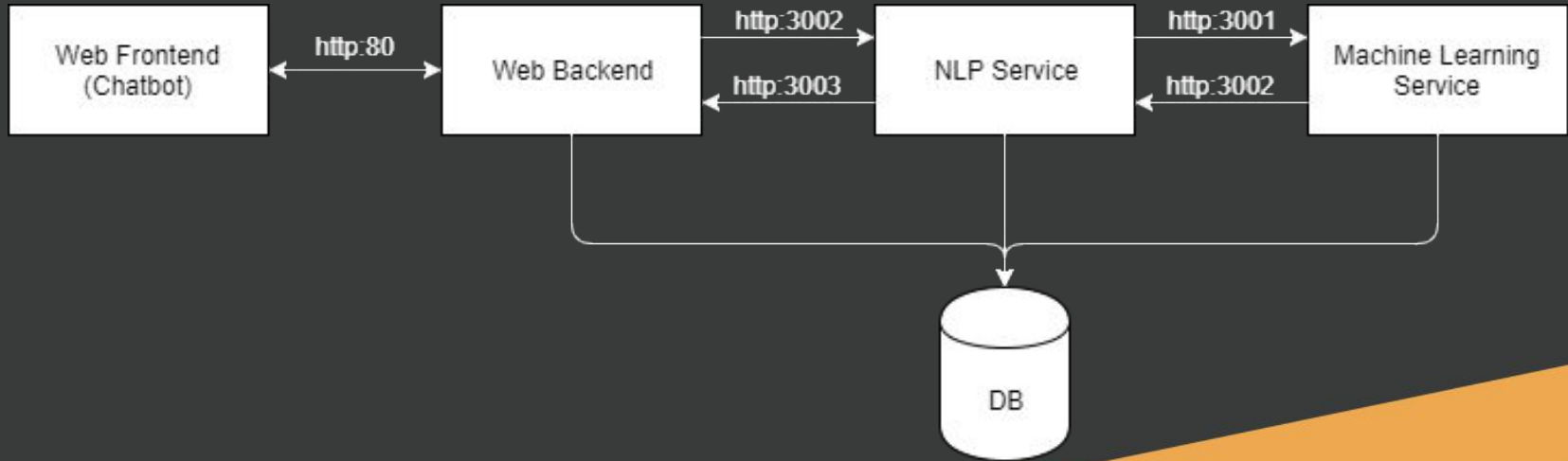
AI Legal Chatbot

Lance Lafontaine Arek Manoukian Sylvain Czyzewski
Samuel Campbell Taimoor Rana Mihai Damaschin
Zhipeng Cai

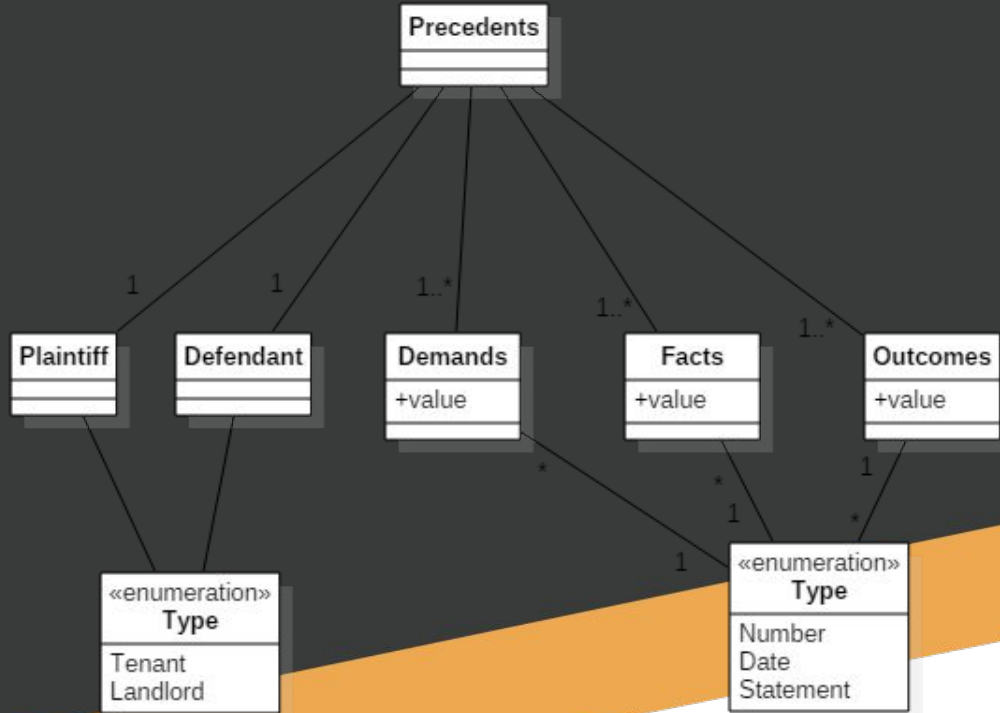
Project Purpose

1. We wanted an engineering challenge that not only brings us learning experience but also is marketable while providing to the open-source community
2. The Regie du logement deals with constant requests while multiple tenants do not realize the vast amount of rights they have over abusive landlords all while landlords
3. There exists multiple ways of making money from advertising spots next to case verdicts to selling a more “advanced” version per subscription to lawyers
4. Completely avoided the use of third party API to protect people’s data

Overall Architecture



Dataset Used (Domain Model)



Feature Extraction

Inspect Sample documents

- Understand writing style of legal documents.
- Find common patterns among various documents

Write regex to match statements

- Verify validity of regex using:
- Fact Coverage
 - Manual inspection of regex matches
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Evaluate regex correctness

- Metrics used:
- % coverage of cluster sentences
 - % of statement coverage per precedent

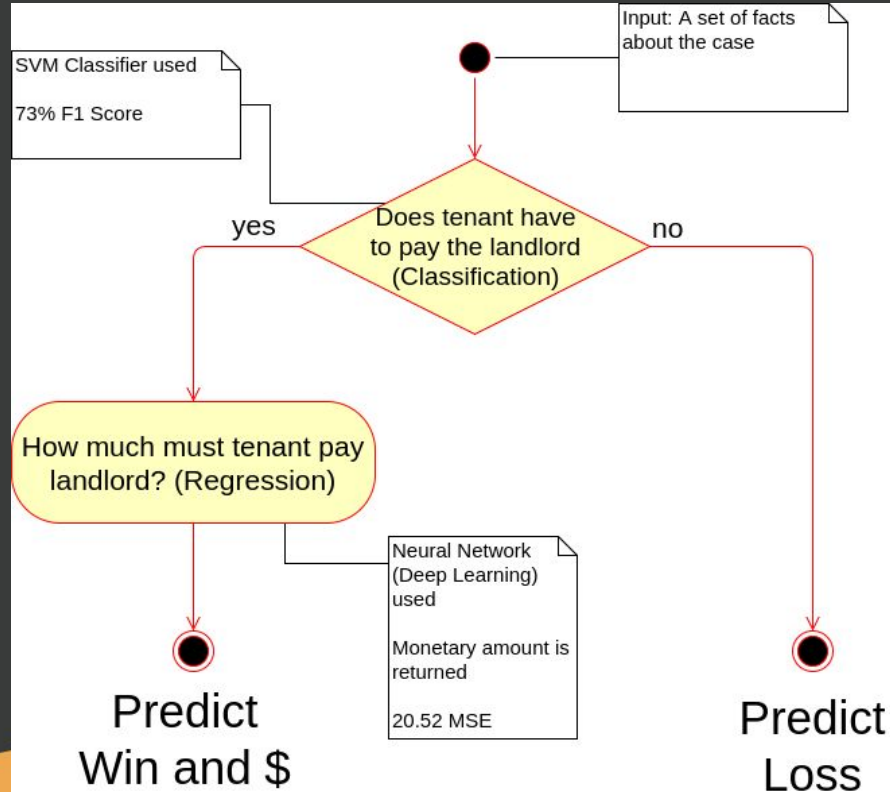
Use entity extraction to extract values

- Extract the following entities:
- Money
 - Date
 - Number

Create Precedent Vectors

- Obtain vector representation of precedents by using regex match.

Prediction: Amount tenant owes landlord



Precedent Similarity

- Determine which precedents are similar to your case
- Experimenting with a few similarity

Metrics:

- Cosine Similarity
- Nearest Neighbour with mahalanobis distance

- Limitations:

- No access to evaluation metrics (Expensive to obtain manually)



Thank you!