DEVELOPMENT OF THE "PILOT" FRAMEWORK FOR OUTCOME PREDICTION IN VIETNAMESE CIVIL CASE JUDGMENTS

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What ?

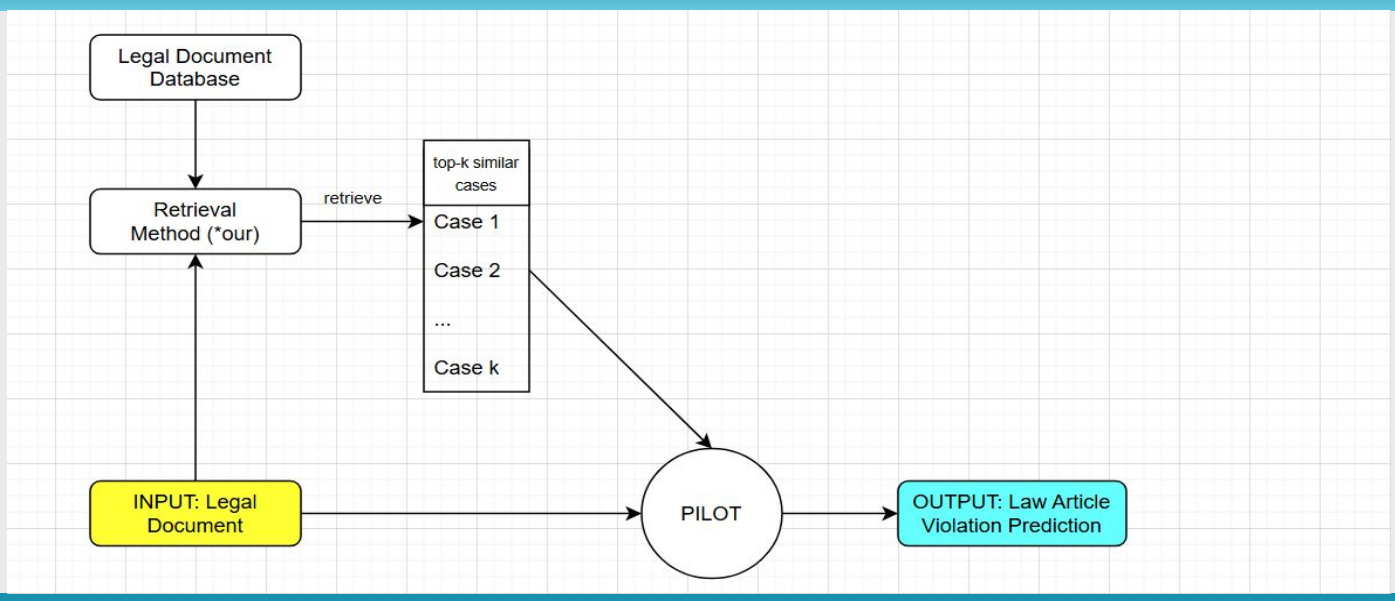
We introduce a framework ViPILOT to predicting the outcome of legal cases, in which we have:

- Proposed a robust information retrieval method in the case law retrieval module to integrate into ViPILOT.
- Built a large Vietnamese database of cases in Vietnam to serve the evaluation.
- Evaluated some existing methods predicting the outcome of legal cases on the ECHR2023 dataset and our Vietnamese dataset.

Why ?

- With the large number of cases arising worldwide each year, coupled with the constant changes in the content of laws, legal professionals are faced with the difficult task of reviewing extensive legal text and delivering accurate and fair results, so there is a need for an automated case outcome prediction system.
- The PILOT framework was proposed to address this issue, but still has problems in **retrieving relevant precedents**.

Overview



Description

1. Retrieval similar cases overview

We build a method to retrieve legal cases related to the case whose outcome needs to be predicted.

We study previous information retrieval methods to integrate into ViPILOT, which helps to improve the performance of case retrieval compared to PILOT.

2. The relevant case retrieval

We study methods to convert text into vector space to convert the query representing the information need and the database of case precedents.

Thanks to the same vector space, the algorithms will retrieve judgments more effectively.

Next, we study the retrieval algorithms and select the best algorithm for retrieving judgments, based on the semantics of the cases, the length of the text,...

2. ViPILOT

The model is improved from the PILOT framework, we improve Precedent Case Retrieval to help ViPILOT retrieve more accurate case precedents.

ViPILOT has three modules: Relevant Case Retrieval, Case Encoder with Evidence Fusion, and Temporal Shift Mining. The Relevant Case Retrieval module retrieves relevant cases to use as references for outcome prediction, we improved this section for better retrieval. The Case Encoder with Evidence Fusion module encodes current cases with fact descriptions and relevant cases. The Temporal Shift Mining module adapts directly to temporal drift.

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