

Expert Finding in Legal Community Question Answering



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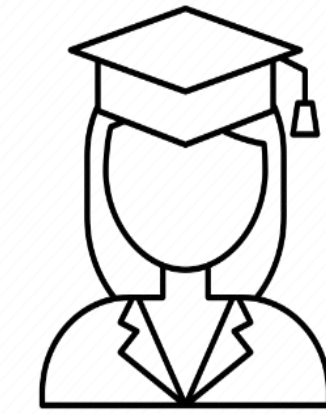
Problem



An Applicant



A problem that should be solved legally in court by hiring a lawyer



A lawyer

There is a need to find lawyer based on the expertise for a case of an applicant since the lawyer's impact is the greatest when they work in their expert field.

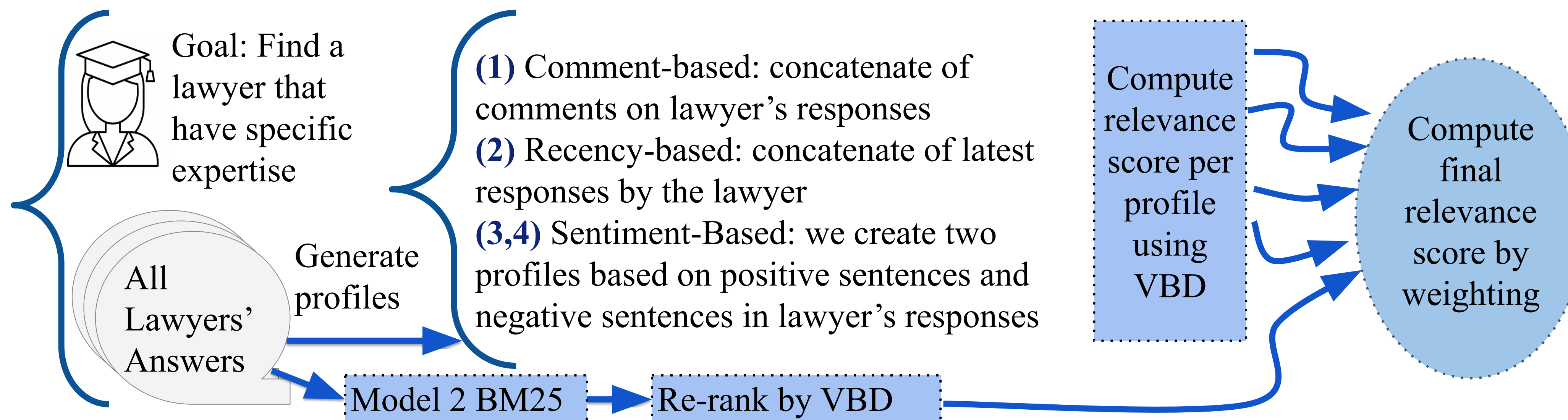
- There are no studies on expert finding in the legal domain.
- Differences with other domains in terms of expertise and authority, and content:
 - Asker knows almost nothing about the law
 - Answerer is a lawyer (professional user)
 - Content is a combination of formal and informal language and it may contain emotional language

Result & Insights

Model	MAP	MRR	P@1	P@5	P@10
Model 1 LM	22.8 %	40.9 %	23.9 %	19.7 %	13.2 %
Model 1 BM25	3.7 %	7.0 %	2.9 %	1.4 %	2.6 %
Model 2 LM	19.4 %	21.9 %	13.5 %	12.7 %	7.8 %
Model 2 BM25	21.0 %	36.6 %	22.5 %	18.3 %	11.5 %
VBD	37.3 %	70.7 %	60.5 %	55.6 %	25.9 %
VBD + Profiles (Weighted)	39.3 %	73.2 %	64.9 %	57.1 %	27.7 %

- Model 1: Candidate Level
- Model 2: Document Level
- Vanilla BERT Document-based (VBD): We re-rank experts' answers by a pretrained BERT model with a linear combination layer stacked atop (VBD) the classifier using Model 2 BM25 as initial ranker.
- The weights of profiles:
 - Comments > Recency > Sentiment positive > Sentiment Negative

Proposed Method



Dataset

- Our dataset has been scraped from the Avvo QA forum. Avvo is a legal online platform where anyone could post their legal problem for free and receive responses from lawyers.