

TECHNOLOGY Method and System for the Minimization of Expected Cost in Multi-Stage Review

OVERVIEW

In civil litigation, e-discovery is the process by which a set of digital documents deemed "responsive" (i.e., relevant) to a certain topic need to be identified within a set of documents, and have to be produced by a producing party to a requesting party unless they are also "privileged" (i.e. contain sensitive information that legally allows the producing party to withhold them). In this process the producing party may incur costs of two types, namely, annotation costs (deriving from the fact that human assessors need to be paid for their work) and misclassification costs (deriving from the fact that failing to correctly determine the responsiveness and/or privilege of documents may damage the producing party in various ways). Relying exclusively on automatic classification would minimize annotation costs but bring about significant misclassification costs, while relying exclusively on manual classification would generate opposite consequences.

Researchers at the University of Maryland have created a risk minimization framework that creates a balance between these two extremes. In this framework, the documents are first automatically labeled for both responsiveness and privilege. Some of the automatically labeled documents are then annotated by human assessors, who annotate for responsiveness (junior assessors) and privilege (senior assessors), with the overall goal of minimizing the expected cost (i.e. the risk) of the entire process. Risk minimization is obtained by optimizing, for both responsiveness and privilege, the choice of which documents to annotate, and the choice of how many of them to annotate.

APPLICATIONS

· Minimizing cost for producing parties in civil litigation **ADVANTAGES**

- · Lower false positives and false negatives than a fully automated solution
- \cdot Lower cost than a fully manual solution

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Additional Information

INSTITUTION

University of Maryland, College Park

PATENT STATUS

Pending

CATEGORIES

• Software + Algorithm

EXTERNAL RESOURCES

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