

## **A Study of Predicting Judgments on Causes of Online Privacy Invasions: Based on U.S Judicial Cases**

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**Abstract :** Since there are growing concerns on online privacy, enterprises could involve various personal privacy infringements cases resulting legal cautions. For companies that are involving online business, it is important for them to pay extra attentions to protect users' privacy. If firms can aware consequences from possible online privacy invasion cases, they can more actively prevent future online privacy infringements. This study attempts to predict the probability of ruling types caused by various invasion cases under U.S Personal Privacy Act. More specifically, this research explores online privacy invasion cases which was sentenced guilty to identify types of criminal punishments such as penalty, imprisonment, probation as well as compensation in civil cases. Based on the 853 U.S judicial cases ranged from January, 2000 to May, 2016, which related on data privacy, this research examines the relationship between personal information infringements cases and adjudications. Upon analysis results of 41,724 words extracted from 853 regal cases, this study examined online users' privacy invasion cases to predict the probability of conviction for a firm as an offender in both of criminal and civil law. This research specifically examines that a cause of privacy infringements and a judgment type, whether it leads a civil or criminal liability, from U.S court. This study applies network text analysis (NTA) for data analysis, which is regarded as a useful method to discover embedded social trends within texts. According to our research results, certain online privacy infringement cases caused by online spamming and adware have a high possibility that firms are liable in the case. Our research results provide meaningful insights to academia as well as industry. First, our study is providing a new insight by applying Big Data analytics to legal cases so that it can predict the cause of invasions and legal consequences. Since there are few researches applying big data analytics in the domain of law, specifically in online privacy, this study suggests new area that future studies can explore. Secondly, this study reflects social influences, such as a development of privacy invasion technologies and changes of users' level of awareness of online privacy on judicial cases analysis by adopting NTA method. Our research results indicate that firms need to improve technical and managerial systems to protect users' online privacy to avoid negative legal consequences.

**Keywords :** network text analysis, online privacy invasions, personal information infringements, predicting judgements

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