

Some Ideas about Adversarial Risk Analysis in Official Statistics

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Abstract

The paper stems from the author's research in the field of Adversarial Risk Analysis, in which an agent D (Defender) seeks to achieve a goal, while another, A (Attacker), seeks to hinder it. Both agents are, in general, expected utility maximisers and approach the problem within the framework of Bayesian Decision Analysis. Unlike Game Theory, which assumes shared knowledge of the opponent's beliefs and preferences, ARA considers the more realistic situation in which D knows his/her own beliefs and preferences and can only guess those of A. The same applies to A. In this paper, we introduce the basic concepts of ARA and offer some ideas on possible applications in Official Statistics to ensure correct classification and privacy protection..

Keywords: Bayesian Decision Analysis; classification; data de-identification

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