INFORMATION INEQUALITIES FOR THE BAYES RISK OF PREDICTORS

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Abstract: The paper provides several lower bounds and an upper bound for the Bayes risk in statistical prediction theory. The bounds depend on the Fisher information or the bias of the Bayes predictor. The results improve and extend the inequalities of Brown and Gajek (1990), Takada (1999) and Koike (1999). As an application we evaluate the minimax risk in a problem of sequential prediction.

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