

On an information divergence measure and information inequalities

PRANESH KUMAR and LAURA HUNTER

ABSTRACT. Information divergence measures are often useful for comparing two probability distributions. An information divergence measure is suggested. This measure is symmetric in respect of the probability distributions and belongs to the well known class of Csiszár's f -divergences. Its properties are studied and bounds in terms of often used information divergences are obtained. A numerical illustration based on symmetric and asymmetric probability distributions compares some of these divergence measures.

COLLEGE OF SCIENCE AND MANAGEMENT
UNIVERSITY OF NORTHERN BRITISH COLUMBIA
PRINCE GEORGE, BC V2N 5P8, CANADA
E-mail address: kumarp@unbc.ca