

Model of wind behavior in the city of Brasília using Variable Order Chains

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Abstract. In this work we used Variable Length Chains to propose a statistic model for the wind's behavior in the city of Brasília. These models were originally presented on Rissanen (1983), who called context the portion of the past necessary to predict the next symbol. As no context is a proper suffix of another context, we can represent the set of all contexts from a variable length process through a probabilistic tree. In this point we suppose that the wind's intensity is a variable length process which takes the value 1 if there is strong wind and takes the value 0 otherwise. Initially, we considered daily measures of the wind's velocity at Brasília, which are associated with the period between 08/21/1961 and 07/15/2019, to obtain the predict models of the wind's intensity. In addition we have shown that has been a change in the wind's behavior at Brasilia after the 2000s.

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