

Secure Multiparty Computations for Privacy Preserving Classifiers

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Abstract : Secure computations are essential while performing privacy preserving data mining. Distributed privacy preserving data mining involve two to more sites that cannot pool in their data to a third party due to the violation of law regarding the individual. Hence in order to model the private data without compromising privacy and information loss, secure multiparty computations are used. Secure computations of product, mean, variance, dot product, sigmoid function using the additive and multiplicative homomorphic property is discussed. The computations are performed on vertically partitioned data with a single site holding the class value.

Keywords : homomorphic property, secure product, secure mean and variance, secure dot product, vertically partitioned data

Conference Title : ICCSDM 2015 : International Conference on Computer Science and Data Mining

Conference Location : Melbourne, Australia

Conference Dates : December 13-14, 2015