An Auxiliary Medical Decision-Support System Based On Argumentation Mining In Medical Text

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Abstract: In medical field, it is very difficult to get correct diagnosis from medical text because there are many possible diseases in each case. Currently Knowledge-based and nonknowledge-based techniques in medical decision-support systems are used to improve this situation, like Case-Based Reasoning and Artificial Neural Networks, but they only classify the diagnostic results and the results are not ideal. Argumentation mining is a useful technique for improving diagnosis. An auxiliary medical decision-support system based on argumentation mining in medical text takes the relationships of the medical attributes into consideration and diagnoses like a man. For one case, the relationship between symptoms is first considered to get the correct reasoning premise. Based on the premise, decision tree are used to classify the possible diseases. At the same time, the conflicts between these disease's symptoms and personal history diseases narrow the scope of possible diseases. Finally, the treatments will be provided according to diagnostic results and the conflicts between drugs.