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Abstract
Cardiovascular disease has been the number one killer all over the world during the past decades; it is also a dread disease behind tumor in Taiwan. The main reasons of death among Taiwan people has changed from Acute Infectious Diseases (like Gastritis, Enteritis, Pneumonia, and Tuberculosis...etc.) in 1952 to Chronic diseases (such as Malignancy, Heart Disease, and Diabetes...etc.) in 1990. Atherosclerosis is the most common illness to trigger the cardiovascular disease; hence, if we could reduce the possibilities of infection or inception, then we can lessen the life threatens from the cerebrovascular disease and the heart disease.
The STULONG database was adopted by this study; it had 1417 respondents' data and collected nearly twenty years Atherosclerosis studies from Europe; these respondents had divided into Normal, Dangerous, and Onset three clusters by whether possessing or infected the atherosclerosis dangerous factor from the first visiting.
Owing to the recorded person data have more than many tens attributes; to build up the better classifier for using the important attributes, this study attempts to pick up the most important attributes for constructing the best classified prediction model by three different approaches, which are Auto Attributes Selecting Mechanism, Related Researchers' Experiences and Advises, and Attributes Selected by a Cardiac Doctor.
After the comparison and analysis by proper efficacy measuring indicators, this study discovers that the Auto Attributes Selecting Mechanism can construct fine classification model. Therefore, to extract the important knowledge rules from data, we can utilize the Auto Attributes Selecting Mechanism first, and then take references from experts; by this way, we can extract more compact and useful knowledge.
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