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THE STATISTIC MODEL FOR THE PREDICTION OF THE
RISK LEVEL OF MYOCARDIAL INFRACTION

A PROJECT REPORT PRESENTED BY

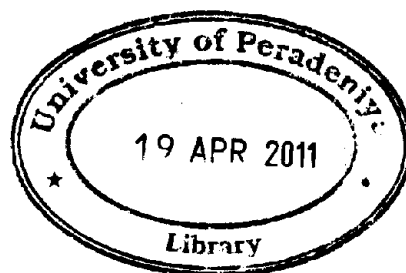
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ABSTRACT**THE STATISTIC MODEL FOR THE PREDICTION OF THE
RISK LEVEL OF MYOCARDIAL INFRACTION****A.S.N.Amarasekara**

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The cholesterol level and fasting blood sugar amount from medical reports and pressure and weight measurement help to identify the risk level of getting heart attack of pressure patients. Therefore generally risk levels of above factors are published. But these levels vary according to age and gender. Also the risk level of getting heart attack varies with the relationship among above factors. Present study takes place to find the single probability value which shows risk level of getting heart attack by considering all factors together. Data from patients who are having records of high blood pressure were collected from hospitals and private clinics in several parts of the country. The cholesterol level, fasting blood sugar, diastolic blood pressure, Systolic blood pressure, sex, age and weight were noted from each patient. New categorical variable called "Condition" was introduced. It had two levels: had no heart attack and had heart attack. Data set was divided in to two parts according to sex. The variation pattern of pair of factors was identified for separate parts. The cholesterol level variable had two separate behaviors with age. Therefore all patients were divided in to two groups. The cholesterol level variable is highly correlated with each other. Therefore a Principal component analysis method was used to obtain uncorrelated data set (Y_1 and Y_2). Thereafter the logistic regression model was fitted separately for each part and each group, using "condition" as the dependent variable and Y_1 , Y_2 and sex as the independent variables. Four separate logistic regression models were fitted. The resulting probability value from the logistic regression models can be used to get an idea about the risk level of the getting heart attack of pressure patient.