

## ABSTRACT

The government created health insurance program for people in need as effort to improve public health conditions evenly, namely BPJS Kesehatan. This study aims to determine the results and classification performance evaluation of BPJS Health membership types, then compared to determine the best method. The methods used are Chi-Squared Automatic Interaction Detection (CHAID) and Quick, Unbiased, and Efficient Statistical Tree (QUEST). The CHAID method was chosen because it can handle categorical data and the created decision tree is easy to interpret. QUEST method was chosen because it can handle categorical data as well as numerical data and has an efficient algorithm. In this study, the data used is BPJS Health membership type data obtained from the results of the National Socio-Economic Survey (SUSENAS) in Semarang City in 2023 as much as 3.392 data. The independent variables are age, gender, marital status, last education level, employment status, and health status. This study uses F1-Score as classification performance evaluation. The analysis showed that the CHAID method produced an F1-Score of 0,753 and the QUEST method produced the same F1-Score of 0,753. Based on the classification evaluation values obtained, it can be concluded that the CHAID and QUEST methods show good classification performance.

**Keywords:** Indonesia's Mandatory Health Insurance Program, Classification, CHAID, QUEST