# ABSTRACT

*Batik is a cultural heritage originated from Indonesia that has been recognized by UNESCO. The way how to make Batik has been developed from time to time. Nowadays, at least there are three known methods to make Batik that are* tulis*,* cap*, or* print*. Batik which use written method has the highest price over Batik that use stamped or printed method, because the manufacturing process is done manually and requires a high level of accuracy. Difficulties in distinguishing* batik tulis *and* batik cap *by normal vision, also lack of knowledge on each consumer can be used for some people to do fraudulent thing that can disadvantage the consumer. Therefore, we need an application that can help consumer to differentiate* batik tulis *and* batik cap*.*

*In this research, the research and also simulation design has been done using extraction method of "Gray Level Co-occurrence Matrix (GLCM)" which is one of method used to analyze texture, and Fuzzy Logic is used as a method of classification.*

*In this research, simulation has been created which can classify the image of batik tulis and batik cap by using two types of database, that are training database and testing database. The total number of training database is nine images and divided based on types of fabrics. The total number of testing database is six images and divided based on the difference in taking distance, types of fabrics, and lightning levels. In this research. Examination has been done with testing image by using grayscale to make accuracy reach 83,3% on 0˚, 45˚ and 90˚. Examination with distance parameter received the highest accuracy at 50 cm distance which is 83,3%. Examination with 40 lux brightness level parameter with GLCM degree received accuracy to 33.3%*

**Keyword: *Image Processing*, Batik Tulis, Batik Cap, GLCM, *Fuzzy Logic***