

# DEVELOPMENT OF FACE RECOGNITION SYSTEM AS A SUPPORT OF ADAPTIVE TEACHING (SAFRAT)

by Dr. Drs. Ir. Haryanto, M.Pd., M.T.

## ABSTRACT

### ABSTRACT

The aim of this development research is to obtain: 1) A prototype of a facial recognition application system as decision support for adaptive teaching required in the learning process. 2) The performance of the face recognition system as a decision support system for adaptive teaching is needed in the learning process. The research was conducted in multi years. In this first year, the research focus is developing a facial recognition/face recognition application system for students in the learning process. In the following year the focus of the research was to implement a face recognition/detection application system in the learning process.

The development research model used is analysis, design developed implementation and evaluation (ADDIE). The place where the research was carried out, the subjects and research respondents were students in the electrical engineering education department of FT UNY who were taking lectures in the even semester of 2022/2023. Data collection techniques using observation / observation. Measurement or data collection is carried out during the learning process with facial recognition/detection using a camera connected to the application system. The analysis technique used is quantitative descriptive statistics. The instruments used were functional test questionnaires and UI/UX testing questionnaires from the face recognition system application. Based on the results of the analysis, it is then used to interpret or interpret the results of the recognition/detection.

The results of this first year of research were 1) a prototype/-model of a face recognition system, in the form of an Android-based face recognition system application to carry out face recognition/detection with three classifications, namely: a) the enthusiastic face category is marked with a green box; b) the less enthusiastic face category is marked with a yellow box; and c) sleepy face category marked with a red box. 2) the performance of the face recognition system as a decision support system for adaptive teaching which is required in the learning process. The performance value based on the analysis results obtained: a) the feasibility level of face detection is 78.57% in the good/high category. b) The functional feasibility of the system is 100% included in the very good/very high category. c) UI/UX test results with an average score of 1.51 are included in the good category.

Kata Kunci: *face recognition, decision support, adaptive teaching, learning.*