OBJECT FOLLOWING AND DETECTION SYSTEM BASED ON IMAGE PROCESSING USING ARTIFICIAL NEURAL NETWORK ON QUADCOPTER DRONE

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ABSTRACT

The DJI Tello is a quadcopter drone that is equipped with various sensors including a camera that is located in front. This drone can be controlled via a WiFi network. In its development, an API in the Python programming language has been provided to make it easier for researchers to control DJI Tello. This study describes the following object method by utilizing facial recognition captured by the camera on the drone. The algorithm used to detect faces in this study is Haar Cascade. Haar Cascade was chosen because this algorithm is very light so the process is fast and works well on computers with low specifications. There are several set points that are used to reference the movement of the drone, both up and down, right-left, and rotating. From the results, the DJI Tello can fly well following objects in the form of faces.

Kata Kunci: *Drone, Object Following, Haar Cascade, DJI Tello*