

# ***DESIGN AND DEVELOP ARDUINO-BASED VALVE SKIR TOOL WITH FUZZY LOGIC CONTROL***

## ***(Case Study of the Supra 125 Motorcycle)***

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### ***ABSTRACT***

*The valve is one part of the machine that is very important for the quality of a 4 stroke engine. This valve is on the cylinder head shaped like an umbrella. Valves generally consist of 2 types, namely IN valves and EX valves. The IN valve functions to regulate the entry of the air and fuel mixture into the combustion chamber. EX valve serves to regulate the exhaust gas combustion results. Machines that have been used for a long time, of course, the quality will also decrease. The engine must be repaired so that it is better, namely by smoothing the valves back on the cylinder head. This valve skir is made using the Arduino program with Fuzzy Logic control. Arduino is a type of micro controller in the form of a single board with an open-source license. Arduino is used to simplify the design of electronic devices in various fields. The program made on Arduino is a control system with Fuzzy Logic. This Fuzzy Logic is a problem solving system that is implemented in a simple system. Fuzzy logic is very useful for solving many problems. In controlling Fuzzy DC motors on a serial monitor, it can be used as a motor controller. Based on the results of testing 10 times the sample with a setpoint pwm = 255. The highest error result is 2.41 rpm in the 2nd test and the lowest error result is 0.08 rpm in the 3rd test.*

*Keywords: Arduino, Valve, Fuzzy, Skir.*