

# **RANCANG BANGUN MESIN PEMBUAT MINUMAN KOPI DENGAN TINGKAT PEKAT DAN TINGKAT MANIS SESUAI SELERA KONSUMEN BERBASIS SMARTPHONE ANDROID**

**Titis Soma Rizyadhi**

*Program Studi Teknik Elektro, Fakultas Sains & Teknologi  
Universitas Teknologi Yogyakarta  
Jl. Ringroad Utara Jombor Sleman Yogyakarta  
E-mail : [titis.soma@gmail.com](mailto:titis.soma@gmail.com)*

## **ABSTRACT**

*Coffee drinks are one of the most popular drinks among the public. The manufacture of coffee drinks can also affect the taste of coffee served to consumers. Of course, every consumer has different tastes in dosing sugar, coffee powder dosing, and water composition. To overcome the problem, the study designed a tool to make coffee drinks that can be adjusted according to consumer needs with the title Design of Coffee Beverage Maker Machines with Concentrated Levels and Sweet Levels according to Consumer Tastes Based on Android Smartphones. This tool can make coffee drinks with manual and automatic dosing. This coffee drink maker can be easily operated using an android smartphone application. We can see the monitoring system on this tool from the OLED 0.96, displaying the scales' results from the Loadcell sensor and the LM35 temperature sensor. The Loadcell sensor used in this tool has a percentage error of 0.1515%, while the LM35 sensor has a percentage error of 1.32%. From the results of testing coffee, water pumps, motor mixers, and pump releases, the results obtained were 100% accurate and 100% precise. However, the calculation was accurate at 93.3% and 100% precision for the sugar test because the sugar crystallized. It is exposed to hot water vapour so that the motor cannot rotate. From the results of testing the whole system from calculating the percentage error, sensors and motors are feasible to use.*

**Keywords:** *Coffee, LoadCell, LM35, Android*