

ABSTRACT

LEGAS, ARCHIE L. ; PINPIN, KENNETH RODRIGO E. and TORREMOCHA, RONNEL C. Design and Development of a Microcontroller-Based Coffee Sorting Machine with Robotic Arm. Undergraduate Thesis. Bachelor of Science in Computer Engineering. Cavite State University, Indang, Cavite. Adviser: Ms. Poinsettia A. Vida.

The design and development of a Microcontroller-Based Coffee Sorting Machine with Robotic Arm was constructed at Binangonan, Rizal. The general objective of the study was to design, develop and construct a coffee sorting machine with robotic arm

The system was composed of five (5) main parts namely: the robotic arm, the control unit, the display unit, weighing scale, and the power supply. The control unit was composed of a microcontroller which was responsible for the operation of the whole system. An LCD was provided to display the weight of the coffee beans to be sorted. The power supply unit provides the needed voltages to the machine.

Proton Plus PIC BASIC was used to develop the program which control the operation of the system.

The design was not able to meet its objective of sorting individual coffee beans. It is attributed to the design's flaw in using load cell of higher range. Also the robotic arm of the design wasn't able to grip tightly any other sample.