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## DEVELOPMENT AND IMPLEMENTATION OF AN UPGRADED CONTROL SYSTEM FOR A MURUKKU MAKING MACHINE

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**Abstract:** The Previous Murukku making machine operated using Mach3 CNC software, which required users to know CNC G-codes, making it challenging for many customers. This research addresses the gap in user-friendly machine interfaces by developing an upgraded control system. The new system was created using a microcontroller, featuring an LCD, switches, and a rotary encoder, allowing users to adjust machine parameters easily. The methodology involved circuit design, programming, and integration of user interface components. Testing ensured reliability and user-friendliness. The results showed significant usability improvements, enabling operation without CNC programming knowledge. Customer feedback highlighted the ease of operation and maintenance, with many opting to retrofit their old machines with the new system. This research demonstrates the potential for similar upgrades in other industrial equipment, emphasizing user-centered design.

**Keywords:** Control system, Microcontroller, Murukku machine, Food production.