SMART CHECKOUT INTERFACE REAL-TIME ITEM DETECTION

A project report submitted in partial fulfilment of the requirements for the award of degree

of

BACHELOR OF TECHNOLOGY

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

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AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

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TAMARAM (P.O), MAKAVARAPALEM (M.O), NARSIPATNAM (R.D)

ANAKAPALLI DISTRICT-531113

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CERTIFICATE

This is to certify that the project entitled "SMART CHECKOUT INTERFACE REAL-TIME ITEM DECTECTION" is the partial fulfilment for the of degree BACHELOR OF TECHNOLOGY in ELECTRONICS AND COMMUNICATION ENGINEERING at AVANTHI INSTITITUTE OF ENGINEERING ANDTECHNOLOGY, MAKAVARAPALEM, NARSIPATNAM, is a bonafied work carried out by **M. MANITEJA (20811A0436), V. BABURAO (20811A0473), G. DEVAMANIKANTA (20811A0423), B. HARIKA (20811A0407)** under the guidance and supervision during 2023-2024.

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PROJECT GUIDE

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ABSTRACT

Auto Bill is an AI-powered autonomous checkout system for retail stores, that combines the power of computer vision and machine learning to provide an amazing shopping experience. Auto Bill provides a faster checkout shopping experience to cut down human interactions in the store to keep shoppers and employees safer during the pandemic. Auto Bill uses computer vision and machine learning to visually detect and instantly identify the items placed and the weight sensor measure the weights of the things placed on the counter-top. Once the items are identified, things are automatically added to the cart and the bill is generated instantaneously. QR code for payment is generated and users can pay the bill by scanning the QR code. The integration of Teachable Machine into the construction of an auto billing machine revolutionizes traditional billing processes. The mechanical construction encompasses a compact design housing key components like a microcontroller for processing, input devices such as touchscreens, and output peripherals like receipt printers. Concurrently, the electrical construction involves incorporating Teachable Machine's AI capabilities, enabling the machine to analyze billing data efficiently. This synergy allows for streamlined billing operations, including invoice generation, payment processing, and customer interaction, all while optimizing accuracy and user experience. The fusion of mechanical and electrical elements empowered by Teachable Machine marks a significant advancement in automated billing technology.