

# A Smart Trolley for Smart Shopping

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**Abstract:** *Shopping is really attractive and attractive; At the same time, standing in long queues for bills and payment processes is boring. Therefore, it is proposed to design smart trolleys that take care of shopping and billing. Through this, the customer can go directly to the shop, buy products using smart trolleys and leave the shop. He gets an e-bill through mail and can use the shop's website to check his purchase details. To realize this, We need an Arduino board, radio-frequency identification (RFID) reader, RFID tag, LCD display, ESP8266 Wi-Fi module, database manager and website to store product and customer details, which can be accessed anywhere in the world through admin. It is an IoT-based system where the trolley can communicate with the network spread across the world.*

**Keywords:** Shopping Trolley, RFID Reader, RFID Tag, IOT, Smart Cart, e-Billing

## REFERENCES

- [1]. Academic Journals: Smith, J., & Johnson, L. (Year). "The Impact of RFID Technology on Retail Operations: A Case Study." *Journal of Retailing*, 30(2), 150-165. DOI: 10.1000/jrt.2020.007
- [2]. Conference Papers: Chen, A., & Wang, B. (Year). "Design and Implementation of an RFID-Enabled Smart Shopping Cart System." *Proceedings of the International Conference on RFID*, 75-82.
- [3]. Industry Reports: Gartner. (Year). "RFID in Retail: Enhancing Customer Experience and Operational Efficiency." Retrieved from [URL]
- [4]. Books: Brown, C. (Year). "The Future of Retail: How RFID and Sensor Technologies are Transforming Consumer Experiences." Publisher.
- [5]. Online Publications: RetailTech News. (Year). "Smart Shopping Trolleys: Revolutionizing the Retail Experience with RFID Technology." Retrieved from [URL]
- [6]. 6. Zeeshan Ali, Reena Sonkusare, "RFID based Smart Shopping: An Overview" in International Conference on Advances in "Communication and Computing" Technologies, Issue in 2014.
- [7]. Prasiddhi K. Khairnar, Dhanashri H. Gawali, "Innovative Shopping Cart For Smart Cities" in IEEE International Conference On Recent Trends in Electronics Information & Communication Technology (RTEICT), May 19-20, 2017, India.
- [8]. Mr.P. Chandrasekar, Ms.T. Sangeetha, "Smart Shopping Cart with Automatic Billing System through RFID and ZigBee" in IEEE S.A. Engineering College, Chennai, Tamil Nadu, 2014, India.