| people | Activity | context | Technology |
|--|---|--|---|
| Customer 18-60 years Male & Female Effortless and navigation quick assistance personalized Promotions recommendations | - Sign-Up The customer creates an account for first-time use Login The customer automatically logs into the system via Bluetoothenabled devices Buying Product Operation The customer browses products and selects items to purchase Edit Buying Operation The customer modifies the product quantity or preferences in their cart - Cancel Buy Product Operation The customer removes items or cancels transactions. | - Customers are in supermarkets, using a smart shopping device in the shopping area. - Noise level and distractions vary depending on the time (peak vs. off-peak hours). - Devices may be shared between multiple users. - Customers might have limited technical skills, requiring intuitive interfaces. - Customers may be standing or moving while using the system. - Promotions and offers are updated dynamically and loaded contextually based on customer preferences. | - TUIO markers for GUI and product interaction. - Bluetooth for context-aware login. - Gesture recognition via Mediapipe for alternative GUI control. - Object detection using YOLO to identify product selection via gestures or direct interaction. - Emotion analysis to assess user satisfaction with interaction methods. - Gaze tracking to identify preferred products and display relevant promotions. - Facial recognition for secure login. |
| Admin 25-45 years Efficient tools for inventory and transaction management, intuitive interface. | - Login The admin logs into the system to manage product and transaction data Add New Product The admin enters new product details into the system Delete Product The admin removes outdated or incorrect product information Accept Buying Operation The admin validates and processes purchase transactions initiated by customers Show Buying Operations The admin views transaction records to analyze trends or handle disputes. | Admins access the system from a back office or admin interface, often seated with minimal distractions. Tasks often involve batch updates or managing multiple transactions. Time-sensitive environment during peak shopping hours. Access control is required to restrict unauthorized use of the admin interface. Data visualization tools are needed for decision-making based on buying operations. | Admin GUI with rotation control via TUIO markers. Object detection for verifying the product database accuracy. Text-based file systems for data storage and management. Mediapipe for gesture-based interaction (for intuitive control during data review). Bluetooth for detecting admin devices and facilitating automatic login. |