

**SHOPGUIDE – A SMART SOLUTION TO ASSIST  
VISUALLY IMPAIRED CUSTOMERS IN GROCERY  
SHOPPING**

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## **Abstract**

Visual impairment becomes a barrier for people to fulfill their day to day activities. People with visual impairment find it difficult to carry out activities effectively due to their eye condition. One of the main areas where visually impaired people face a lot of difficulties, is grocery shopping. Most of the time, they are accompanied by another person to do grocery shopping. This becomes a barrier to their independence. They wish to do independent grocery shopping but due to various challenges they face during this process, they tend to avoid going to the grocery store alone. The ability to conduct independent grocery shopping helps visually impaired people to achieve a level of independence.

The aim of the is project is to identify the challenges faced by visually impaired people in grocery shopping and design, develop and evaluate an IT solution to enhance the shopping experience for them. The main challenges were identified and analyzed by doing a comprehensive study of the existing literature. To further validate the identified problem domain, focus group discussions and interviews were carried out with identified target audience as well as the other stakeholders relevant to the problem domain.

Based on the findings from the existing literature as well as the discussions, the need for a solution to this problem was found evident. Based on the identified factors, a simple mobile application called “ShopGuide” has been designed and developed. This application includes features that would be helpful for visually impaired people to carry out independent grocery shopping effectively.

The developed application was tested and evaluated by industry experts as well as the end users to ensure the quality and standard were maintained. This application was considered to be successful in tackling the identified challenges using the enhanced features.

**Keywords:** Visually impaired, grocery shopping, independent, low vision, challenges, assistance