How people with visual impairments use a commercial computer vision-based application

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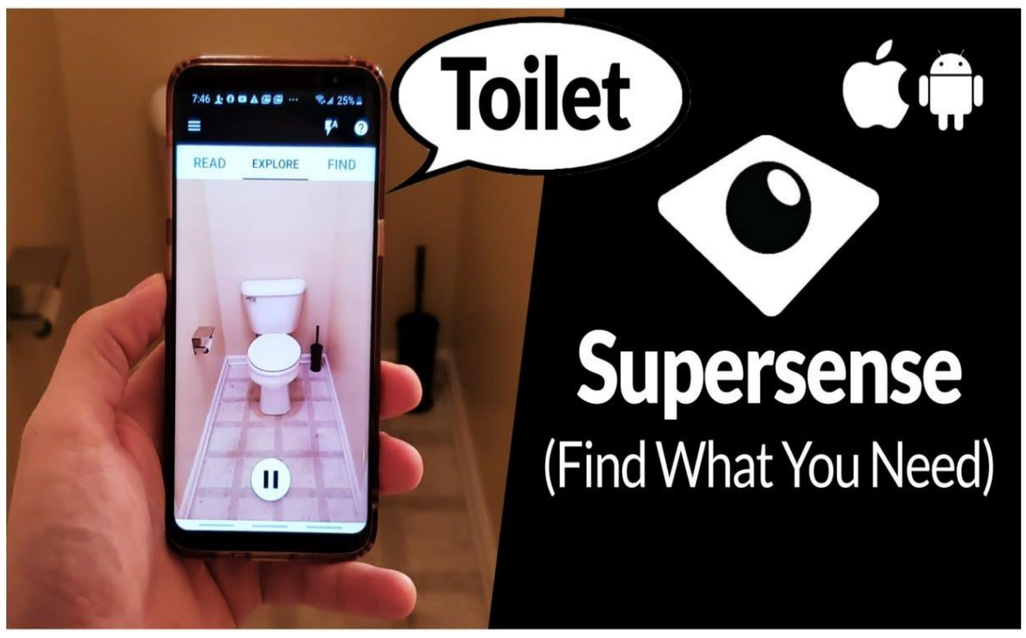
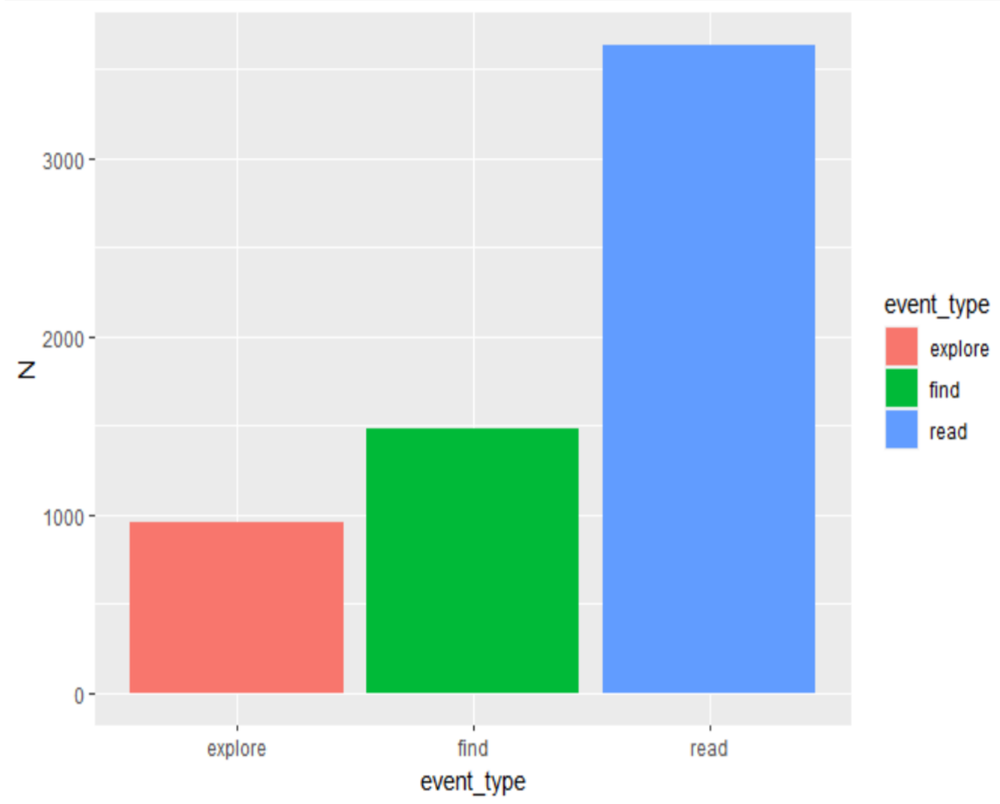
Introduction

People with visual impairments (PVI) face poorer quality of life, mental and physical health, as well as low socioeconomic status. The rising potential of computer vision provides a unique opportunity to assist people with low vision in real time with minimal cost and at a large scale.

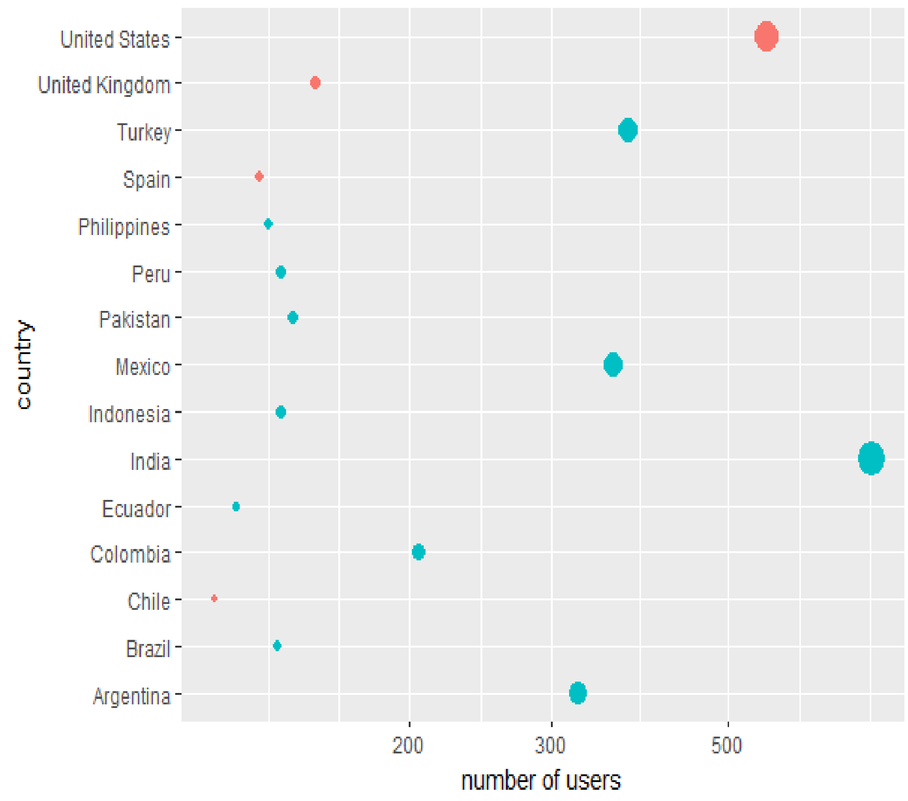


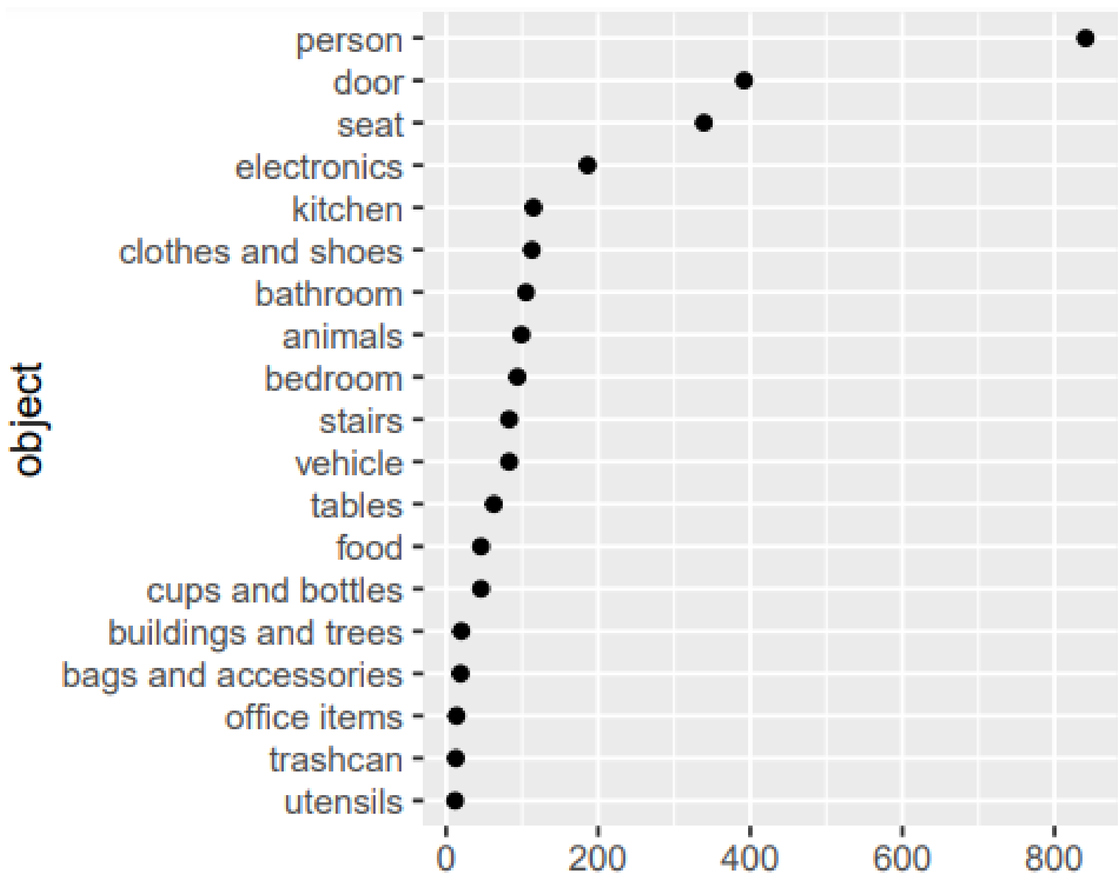
Methods

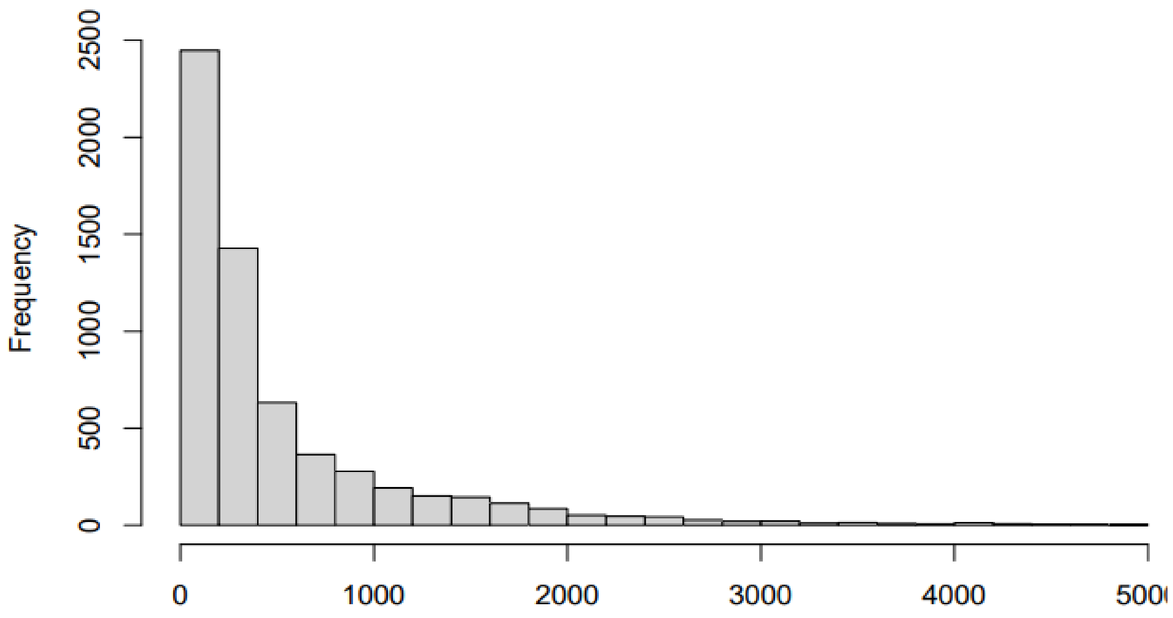
The analyzed data was collected approximately over one month, between 01.06.2021- 02.01.2021, it included 5,196 users from 127 countries, and 15,746 sessions.



Results







Summary

These preliminary finding suggest that PVI use computer vision-based applications to help with everyday activities and may benefit from it despite issues with accuracy that may be more prominent in a computer vision application than with human assistance-based application (e.g., Aira or VizWiz), Users used the application for a longer time and searched for different categories of objects. Notably, users varied in origin country and included users with VI from developing countries, Future research should explore whether and which difference exist in the needs of PVI from developing and developed countries.

Reference

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