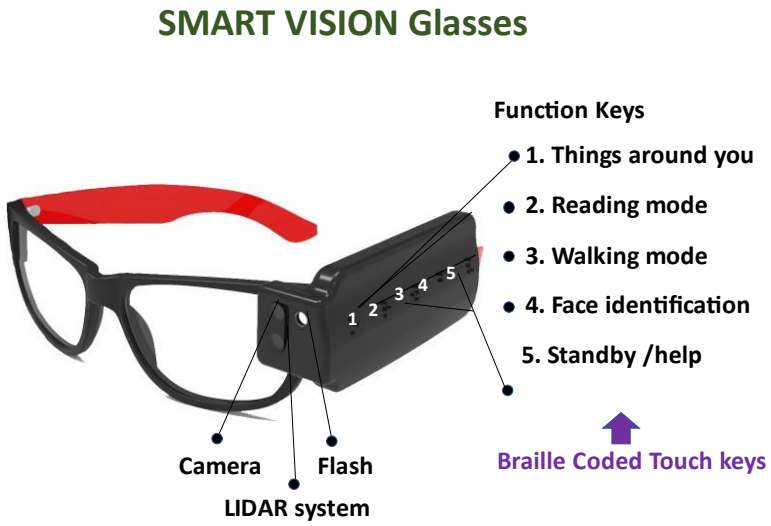
About SMART VISION

SMART VISION is an innovative, affordable, AI-powered assistive device for the visually impaired to enable them to live a dignified and independent life. The device is a wearable (head-mounted) device which can be attached to the side of a pair of eyeglasses. It is enabled with a camera with flash, Lidar (A remote sensing technology) , Bluetooth microphone and small speaker. It connects to a smartphone where an AI-based app provides the “intelligence” to help the visually impaired “see” objects around them.



Features

- Plug and play
- Multiple Indian language support
- Audio tutorial (no printed manuals)
- Self-guided tutorial
- Page alignment and position of the document
- Panic button (msg to the loved one, with location, picture of surroundings)
- Currency detection (currently for Indian currencies)

Functions include:

- **Reading text** - reads printed or handwritten text aloud in English and most common Indian languages. With this device, the visually impaired can read books in any language of their choice
- **Object recognition** - Identifies objects and describes them audibly. The device guides them when they are walking in a public place like a neighboring street, way to school/college /work.
- **Walking assistant** - Warns the wearer of obstacles in front of them

- **Facial recognition** - Describes people's faces and expressions, and identifies faces previously "saved" by the wearer.
- **Voice recognition** - the wearer can give voice commands to the device
- **Braille buttons** - the wearer can select functions based on touch

It addresses the following uncorrectable visual impairments:

- Blindness from birth (39M)
- Severe Glaucoma (76M)
- Diabetic Retinopathy (146M)
- Age related Macular Degeneration (196M)
- Vision Loss due stroke (20% of stroke sufferers)
- Damage to optical nerves (infection, accidents) (40-48% of head injuries)

Product Development

Smart Vision was developed by a joint partnership of Vision-Aid, Aravind Eye Hospitals, and an Indian tech company called Smart Health Global, as a low-cost alternative for people in developing countries.

Affordable Pricing

The most significant aspect of Smart Vision is its affordability. Smart Vision is priced at Rs. 25,000 (approx.. USD $350) which is a fraction (less than 10%) of other similar products in the market today.

Product Roadmap

The device has been rolled out in an initial pilot in 2021, to many locations in India including all the major Eye Hospitals in India, and several blind schools. Feedback was very positive. Suggestions for improvement were incorporated and now a new Gen 2.0 version of the device is being rolled out in early 2022. User testimonials can be seen in the second video below which was recorded after rolling out of Gen 2, in Jan/Feb 2022. Gen 2.0 is available for purchase currently. For more information, please contact info@visionaid.org.

Online resources:

Short Overview of Smart Vision Demo (~30 seconds video): https://youtu.be/GgcCNcShew8

Smart Vision Testimonial by blind users in pilot (~2.5 minutes) : https://youtu.be/alGpNaUvxrk

Detailed overview of Smart Vision (8-minute video)
https://www.youtube.com/watch?v=21bbf8SHVKc

Good news for those with low or no vision – Article in The Hindu
https://www.thehindu.com/news/cities/Madurai/good-news-for-those-with-low-or-no-vision/article35964002.ece

Smart Vision Device Launched - Vision-Aid website
https://www.visionaid.org/news/369-vision-aid-launches-smart-vision-device-in-madurai

Testimonials on social media:
https://youtu.be/uL6YtbfmKOE
https://drive.google.com/file/d/1dBTPUynIFlogCpetf0j_plsseCupfR3S/view?usp=drivesdk

Time of India
https://timesofindia.indiatimes.com/business/india-business/rcme-aravind-eye-care-give-smart-vision-devices-to-300-disadvantaged-people/articleshow/86403994.cms

Rotary
https://rotarynewsonline.org/ai-powered-spectacles-for-the-visually-impaired/

LinkedIn
https://www.linkedin.com/pulse/aravind-eye-hospital-has-launched-ai-powered-glasses-kalaivani-l-m/