EMBRIONE

PES UNIVERSITY
CSE

NATIONAL LEVEL HACKATHON

KODiKON -3.0

NETWORKING – HACKATHON – MENTORSHIP

EnVisionAI

Empowering Sightless Vision with Artificial Intelligence brilliance

AI-Vision-World

PLATFORM PARTNER

H2S HACK2SKILL

TEAM DETAILS

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EnVISIONAi

(ARTIFICIAL INTELLIGENCE SPECTACULAR GLASS)

- It is our innovative idea to aid the blind people using ai technology so they can identify people ,sense emotions, scan objects and obstacles clearly.
- The major problem faced by blind people is the inability to move without support and unable to identify peoples ,objects and their emotions etc.
- Most of them are taken granted of their disability and they are helpless. So with **AISG ,they can identify through the signal given to their brain and do the needful themselves without external help**

- People who are affected by the problem are the **visually-abled** group of people.
- They are unable to see things so it is impossible to move around without help.
- The sound signals ,even though cam be identified, is not fully understood and with help of ai , information gathering and processing is increased, giving them a confidence.
- What if ai spectacular can identify each **member of family**?
- Example like now days phone with **Facelock** can identify the owner.
- So it seem possible to connect with ai spectacular.

- ***EnVisionAI*** is a revolutionary idea useful for the blind people. The development of advanced computer vision systems coupled with wearable devices can empower blind by providing real-time information about their surroundings and enhancing their ability to navigate and interact with the world.

- The main features are :
- 1.AI-powered Wearable Device
- 2.**Object Recognition-computer vision algorithms** to analyze the captured images and recognize objects, people, and other relevant features.
- 3.**Auditory Feedback**
- 4.**Optical Character Recognition** (OCR) to extract text from images, and then convert it into speech using text-to-speech technology.
- 5.**Facial Recognition** and **Emotion Detection**

- When our idea is implemented , it will be a revolutionary as it helps the blind to get an impact both emotionally and socially.
- They can work independently and deal with their own jobs.
- The glass is easily gathering input and giving output through voice or brain-neural signals as in earing aids.
- By combining these technologies, an AI solution for blind people can provide real-time assistance, improve their spatial awareness, and enable greater independence in daily activities. It has the potential to revolutionize the lives of visually impaired individuals and empower them to navigate and engage with the world more effectively

TECH STACK

- **Frontend:**
- 1. User Interface: Develop an accessible and user-friendly interface that blind users can navigate with screen readers or voice commands.
- 2. Text-to-Speech (TTS): Implement TTS technology for converting text information into speech for users.
- 3. Speech Recognition: Allow users to interact with the system using voice commands for input.
- **Backend:**
- 1. AI Algorithms: Implement AI models that can recognize and process various types of data, like images, text, or audio.
- 2. Data Processing: Handle the incoming data, preprocess it, and prepare it for AI analysis.3. User Management: Manage user accounts, preferences, and personalization settings.
- **Database:**
- 1. Storage: Store user data, preferences, and any necessary information for the AI system to function effectively.
- 2. Accessibility Metadata: Store additional metadata to ensure the system is truly accessible to blind users.
- **APIs/Services:**
- 1. Text Recognition: Utilize APIs or services that can recognize and convert text from images or documents into accessible formats.
- 2. Navigation: Incorporate location-based services to help blind users navigate their surroundings.
- 3. Voice Assistants: Integrate with voice assistant platforms like Amazon Alexa or Google Assistant for added accessibility.

BUSINESS SCOPE

- AI solutions for the blind can bring significant value to various institutions, companies, NGOs, and other organizations in several ways:
- 1. **Inclusivity and Accessibility:** By implementing AI solutions that enhance accessibility for blind individuals, organizations demonstrate a commitment to inclusivity and social responsibility. This can improve their public image and reputation.
- 2. **Customer and Employee Engagement:** Accessibility features powered by AI can enhance the user experience for blind customers or employees, increasing engagement and satisfaction. This can lead to improved customer loyalty and productivity.
- 3. **Innovation and Competitive Advantage:** Organizations that leverage AI for the blind demonstrate innovation in their products and services. This innovation can give them a competitive edge in the market.
- 4. **Market Expansion:** By making products and services accessible to the blind, organizations can tap into a previously underserved market, potentially increasing their customer base and revenue.
- 5. **Collaborative Opportunities:** Organizations can partner with or sponsor initiatives focused on AI for the blind, enhancing their corporate social responsibility (CSR) efforts and creating collaborative opportunities with NGOs and advocacy groups.
- 6. **Research and Development:** Investing in AI for the blind can lead to advancements in AI technologies, which may have broader applications and potential commercialization in other sectors.
- 7. **Training and Skill Development**: Organizations can provide training and skill development programs related to AI and accessibility, contributing to the empowerment and employability of blind individuals.