Blind Eye Project

By

The Shield Team

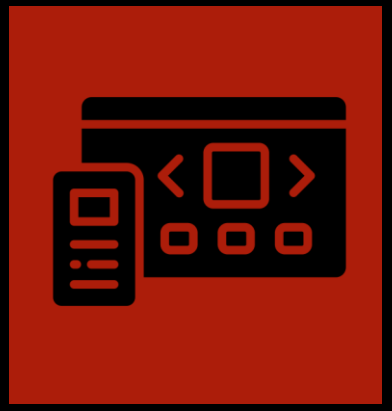
GROUP ∞

Android

Mark

Gemini Models

Brian



UI/UX

Kevin

Animation

Wycliffe

Research

AnnJoy

CHAPTER ONE

INSTITUTIONAL TRAINING

BlindEye main feature is trained control environments e.g. public offices. With this accuracy and safety in app use is increased to over 90% after getting insights from Truelens TensorFlow plays a crucial role in training our AI model to adapt to the unique learning needs of each user.

Image Recognition

Dog

Object Detection

1 OBJECT DETECTION

Using the power of TensorFlow's object detection models and Teachable Machine, our app processes the input from the device's camera or other sensors to identify objects.

2 Image Recognition

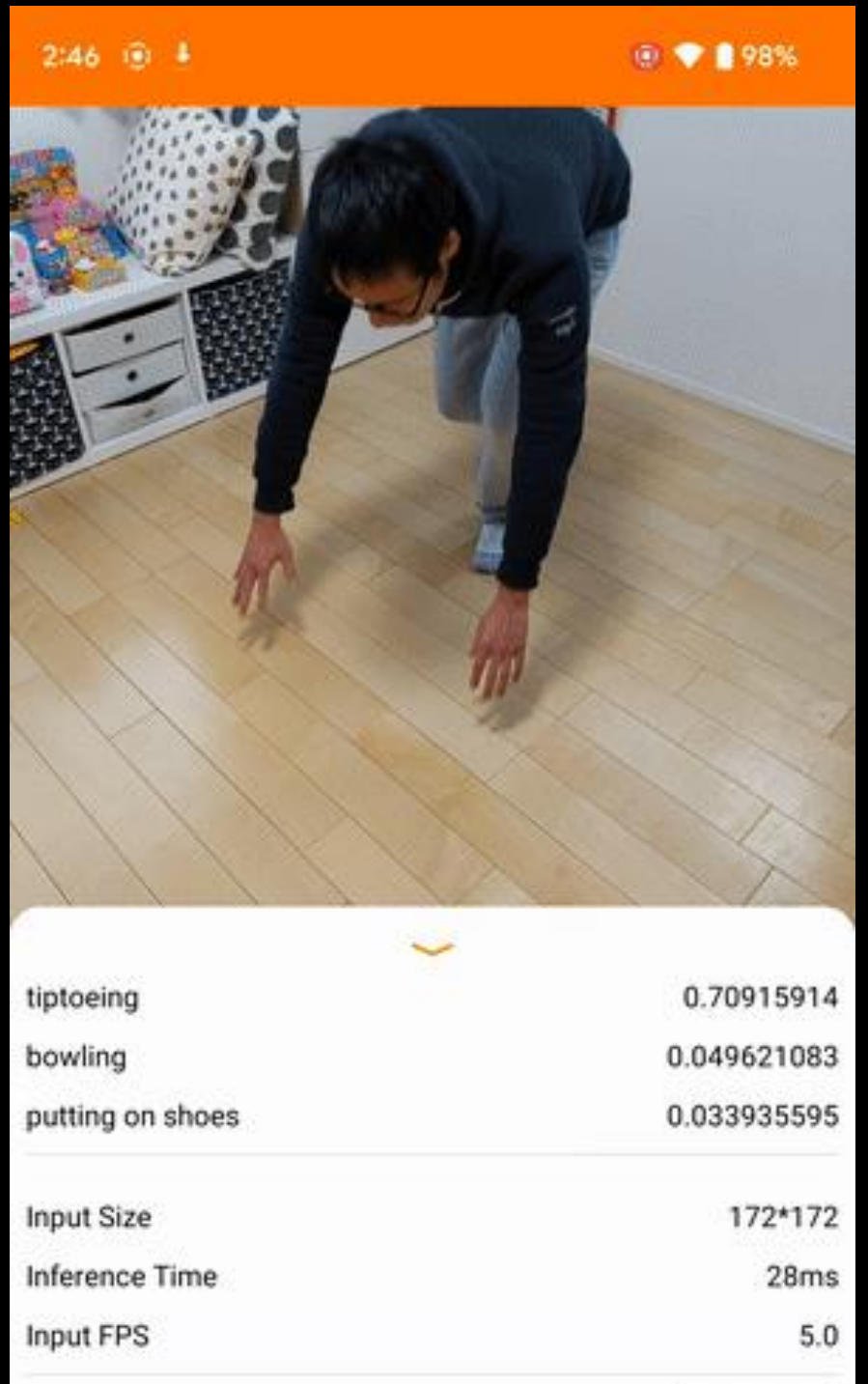
The model recognize and classify objects in the camera's field of view, providing users with valuable information about their surroundings.

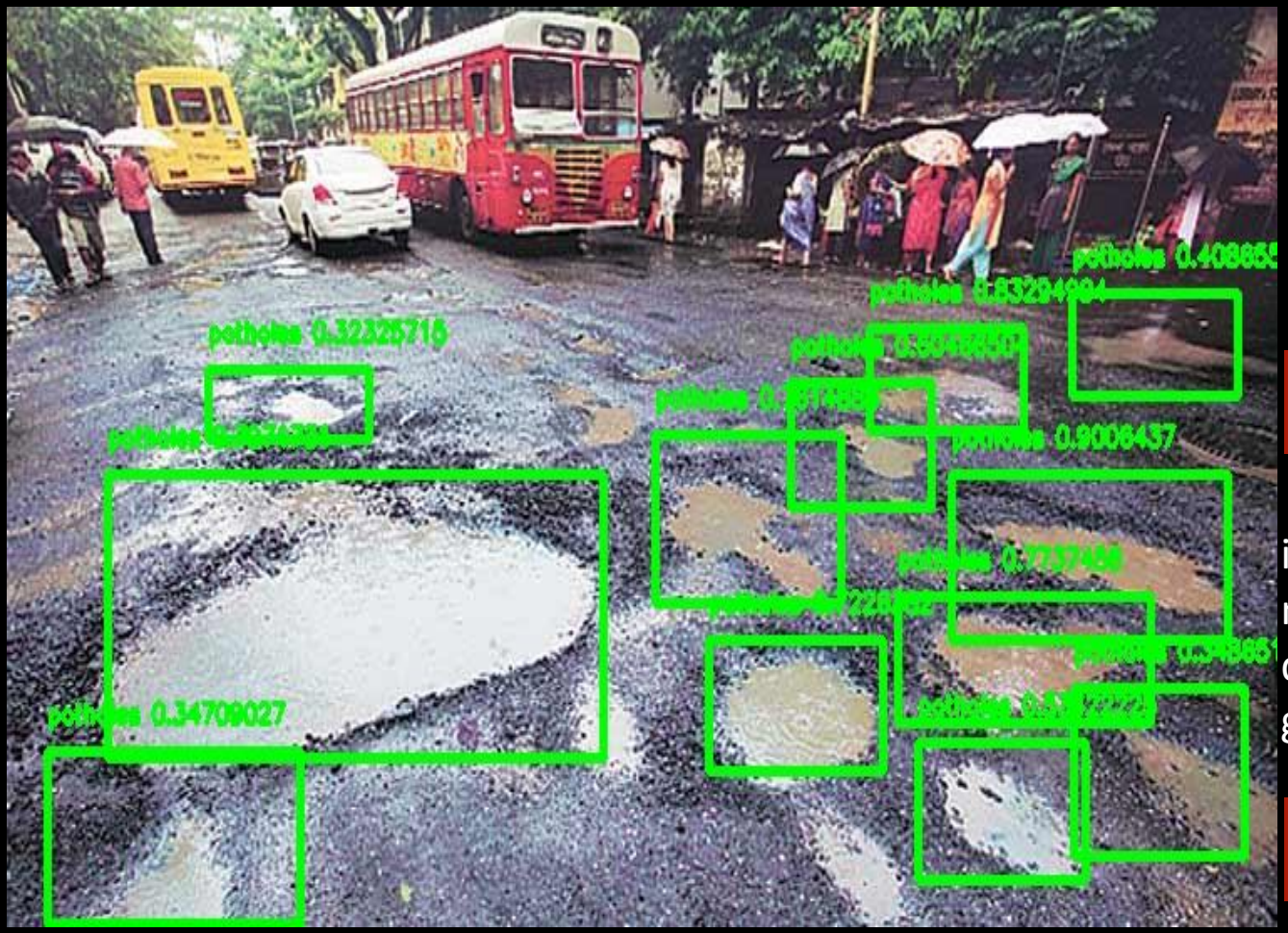
3 Real Time video Description

It captures the video feed from the device's camera. TensorFlow's computer vision models analyze the video frames, identifying objects, people, and the layout. It then converts the analysis into natural language descriptions, which are then relayed to the user through text-to-speech technology.

4 Object Positioning

Helping users locate specific items, like a dropped key, is made possible by TensorFlow's object positioning algorithms.





5 Intellingent Path Description

BlindEye uses models with data collected and fine-tuned by institutions for path and route recognition. The TensorFlow models process input from various sensors, By comparing this data with the pre-trained institutional models, the app generates real-time, accurate descriptions of the path.

6 Hazard Recognition

Teachable machine pre-trained with data like potholes and bumps

CHAPTER TWO

CLIMATE CHANGE

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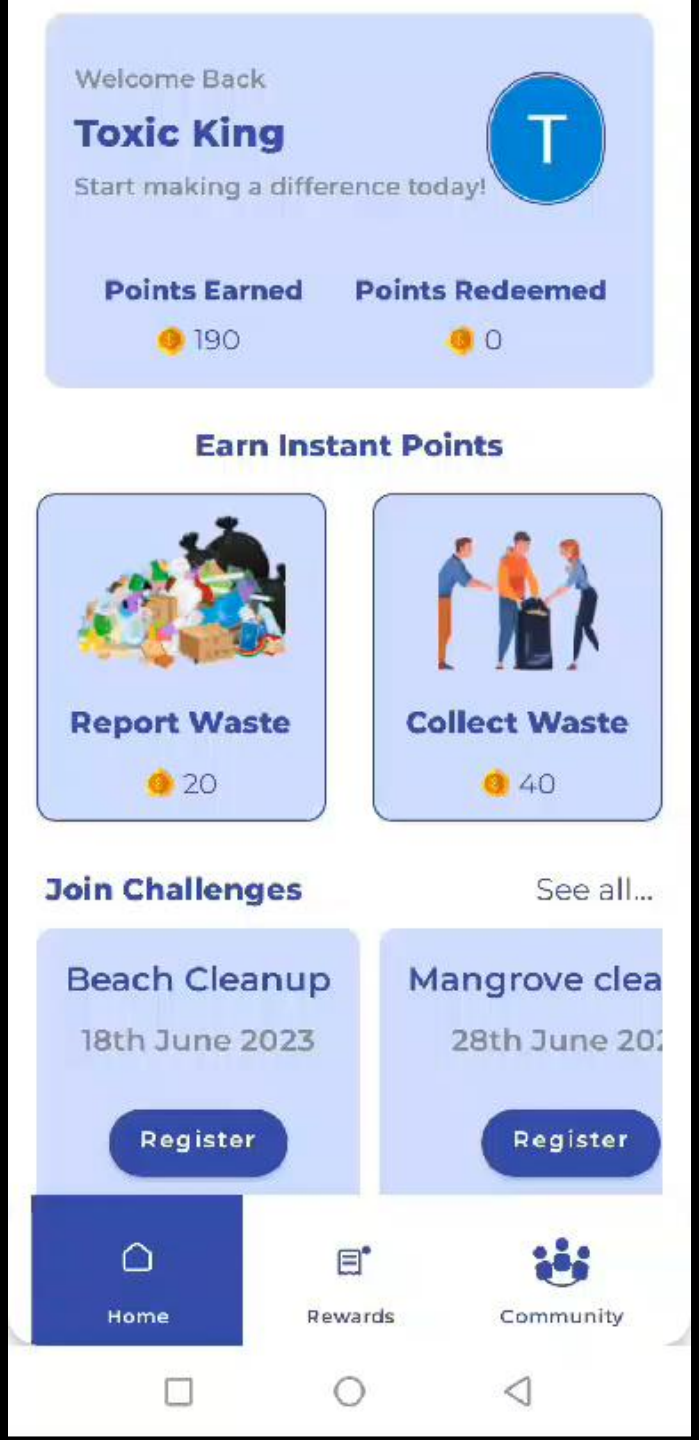
Our project is aligning with the ambitious Vision 2030, and following the recent climate summit, where carbon credits were introduced as a critical initiative. In line with this, our app offers a solution to provide users with carbon credits whenever they engage in environmentally-friendly actions, encouraging and rewarding green behaviors. This approach not only supports our commitment to Vision 2030 but also contributes to a more sustainable future.



1 Tokenization

Using the power of TensorFlow's object detection models, our app processes the input from the device's camera or other sensors to identify objects.

2 QR codes

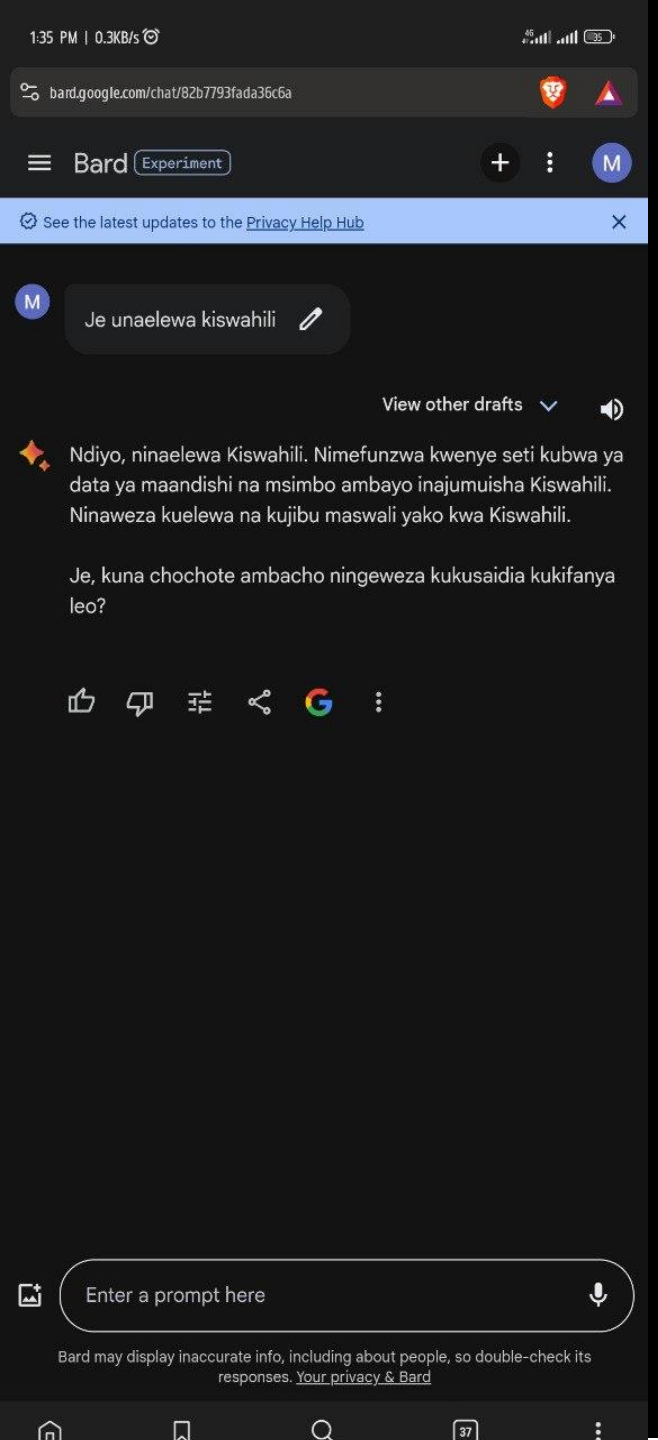
Level one tokenization uses smart bins with QR codes to scan and identify when user disposes waste properly

CHAPTER THREE

NATURAL LANGUAGE PROCESSING

Natural language processing

Our app leverages cutting-edge Natural Language Processing (NLP) technology to accept user input through audio, allowing for seamless and intuitive interactions. It responds with a personalized voice, creating a unique and engaging user experience. To achieve this, we utilize Google's Text-to-Speech (TTS) service, ensuring clear and lifelike responses that enhance the overall user interface and accessibility of our application.



1 Gemini LLM PARSING

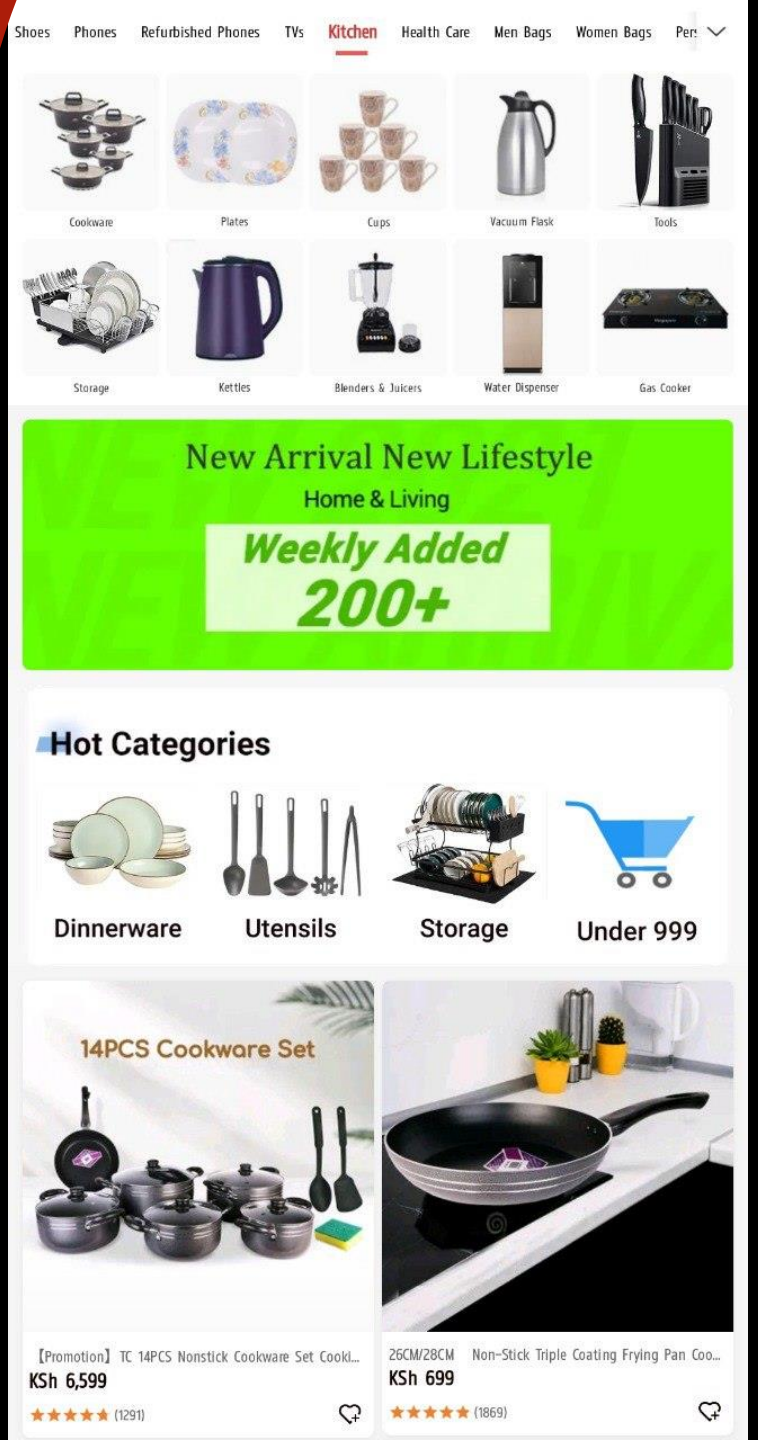
Our app utilizes the LLM parsing to provide more human-like and refined descriptions of environments and related content. This advanced parsing technology enhances the quality and naturalness of the information delivered.

2 Multilingual Support

Due to the nature of Gemini there is support for few trained languages like Swahili and more local languages. Our app utilizes this technology for friendly uses

CHAPTER Four

COMMERCE



1 Ecommerce

Users can instruct app to perform a web search on an item on the screen to give insight about prices and reviews. We propose to have acces to real time databases like Jumia and kilimall to have more reined data

2 Supermarkets, Malls

Supermarkets are also to be trained personalized to allow easy movement and products are easily identified.
We have a cart to add and remind user of what they already have

MORE FEATURES

Activity description, Realtime video description, Intelligent description, Light Sensor, Reading Assistant, Emotion Recognition, Personalized Voice Training, Gesture Recognition, Hazard Recognition, Social Interaction Assistance, Multilingual Support, Object Positioning, Privacy, User-Centric Learning, Indoor Navigation.

HAPTIC SENSORS

Our app incorporates haptic sensors to help in detecting how far objects are and vibrating based on distance. It uses infrared and ultrasonic rays to detect.

Reading assistant

The app allows users to take photo inputs and read out with tts and can also summarize the input data.

Indoor Navigation

This aims to use the science of phototropism to allow user navigate out of rooms through such mechanisms.

Gesture recognition

BlndEye allows users to interactor with app with gestures like swipe and proximities. It is more friendly to the visually impaired

FAQS

01 **Wouldn’t it be noisy**

We handle that with haptic feedback

02 **How about Outdoors**

The Model keeps Learning on new environments

03 **How Fast is the response**

We use edge computing technologies we have local processing to have very fast speeds

04 **What is the end goal**

Include The impaired in the society with more freedom

END

THANKS