# ScreenerPlus APP

Leveraging AI for Malaria Diagnosis into a mobile application.

## Team IntelliTech

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# Introduction

- ScreenerPlus is an app that scans blood smears if positive with malaria or not.
- It also has the option to upload blood smear taken from third party microscopes.
- It has option to capture blood smears using lenses or 100x zoom camera

# Solution Overview

- AI model trained to detect malaria parasites in blood samples.
- Utilizes deep learning algorithms for a good accuracy.
- Integrated into a flutter mobile application.
- User-friendly interface for healthcare professionals and lay-man users.

# Problem Statement

- Most countries in west africa are known for high level of malaria cases,
- About 97% of Nigerians are open to risk of malaria (WHO, 2023)
- In 2022,  Nigeria has highest percentage of global malaria cases
- 27% in the world and 55% in West Africa (World Malaria Report, 2022)
- Manual diagnosis is time-consuming and prone to errors.
- Give way for non-technical individual to test for malaria

# Key Features

## User Interface:

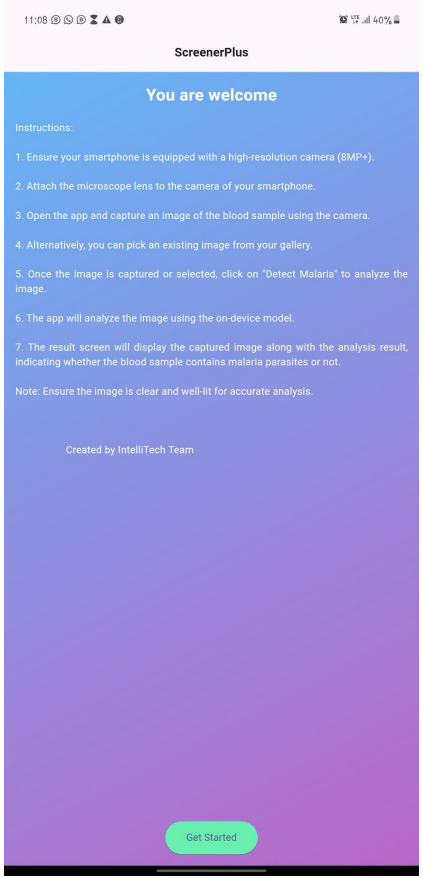
- Easy-to-navigate dashboard.
- Real-time detection and result display.

## Accuracy and Speed:

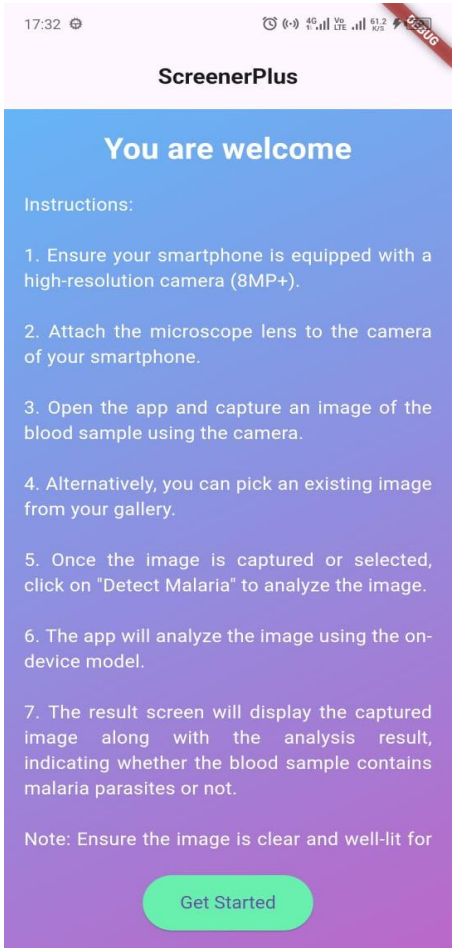
- High precision in parasite detection.
- Fast processing time for large datasets.

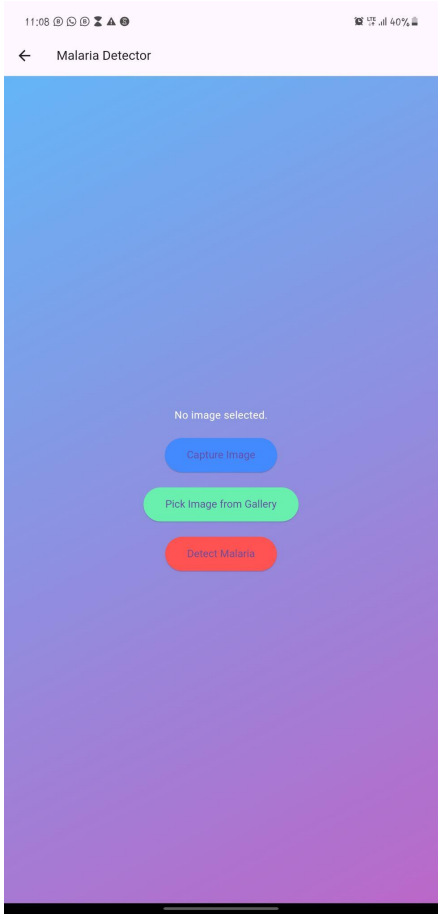
## Reporting:

- Generates detailed diagnostic reports (In future)
- Exportable data formats in PDF CSV (In future)



# Positive Use-Case

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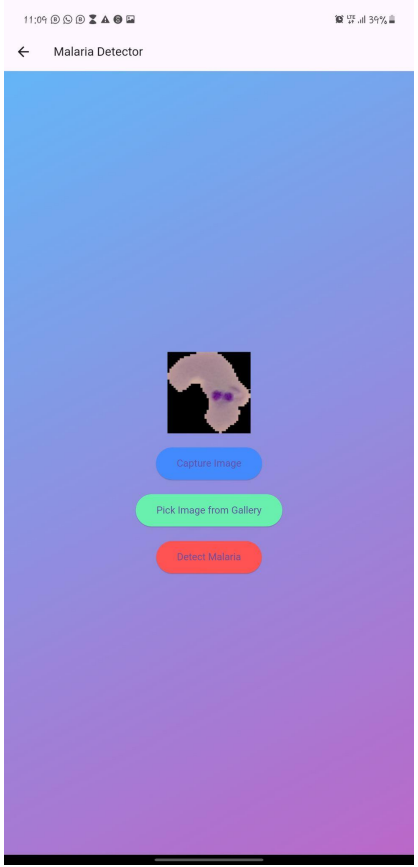


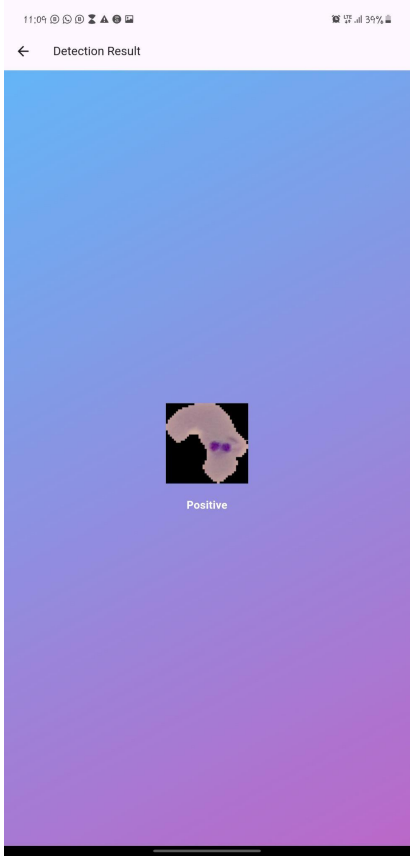


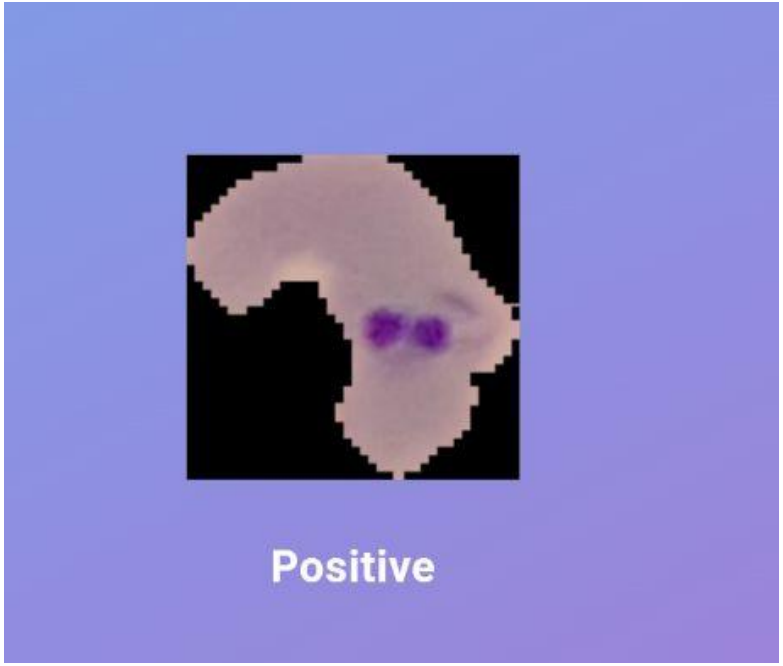

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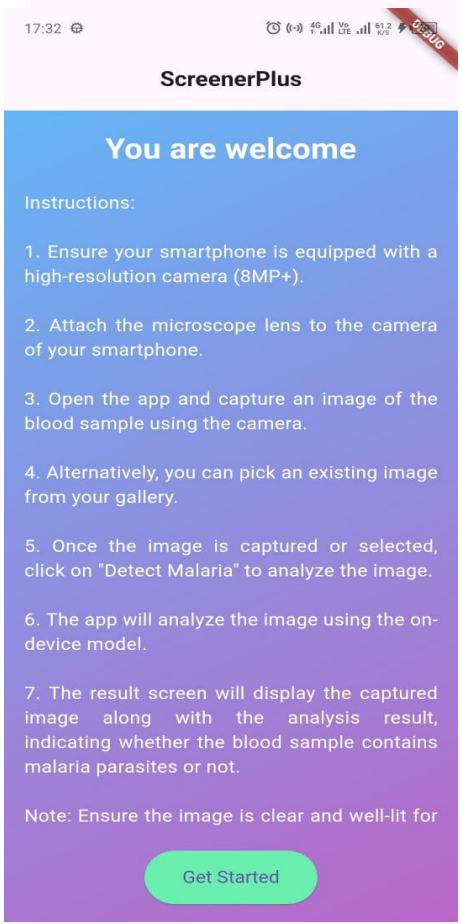


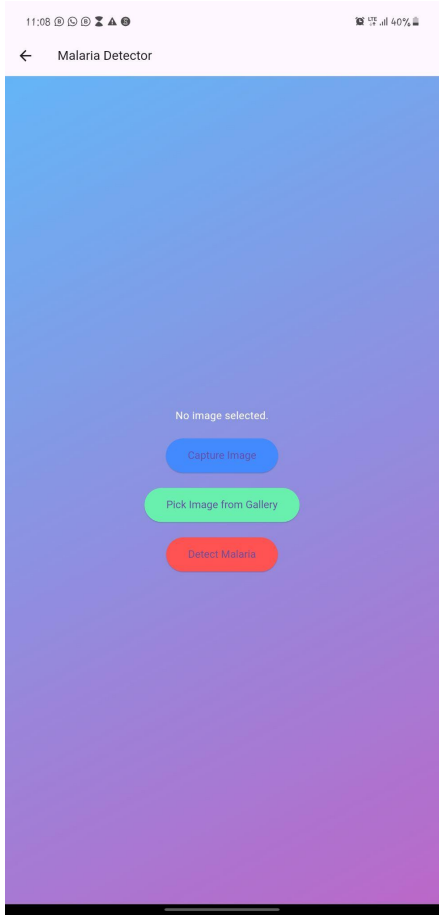


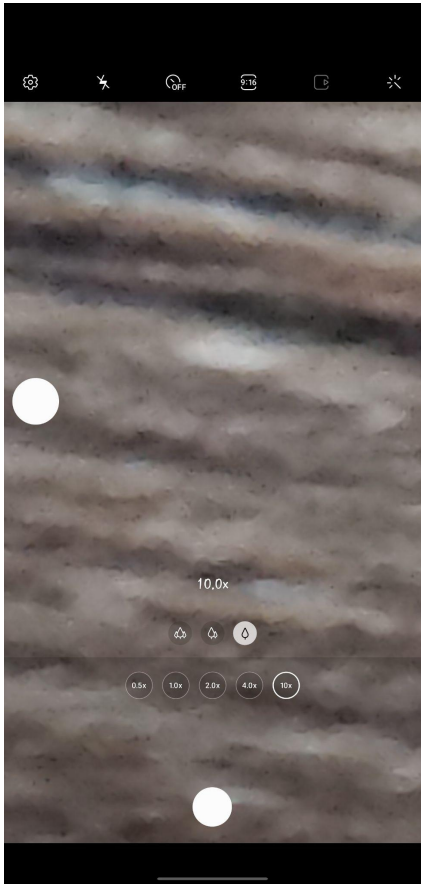

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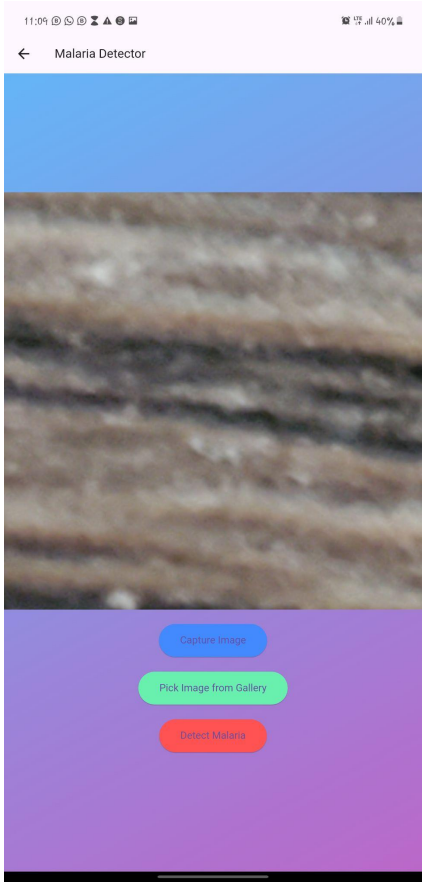


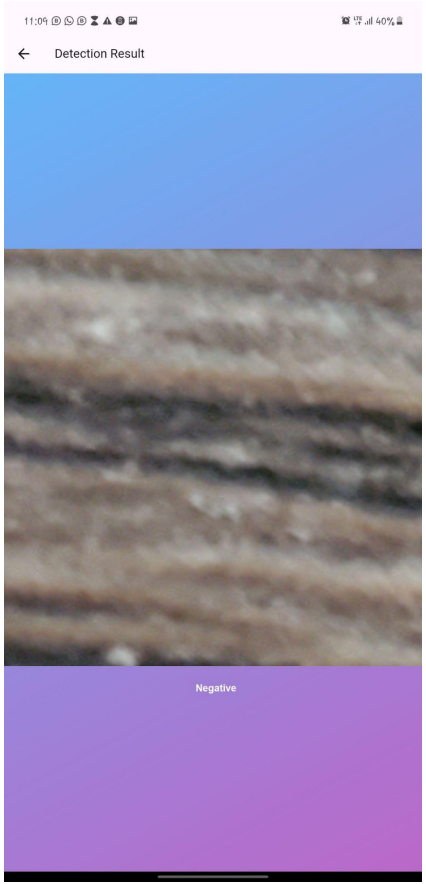


# Technical Details

- Used available dataset after proper cleaning
- Training process and validation.
- Model: Tensorflow, Numpy, TFLite,
- Backend: Python, TensorFlow/Keras.
- Deployment: Cloud-based or on-premises options.

# Case Study

**Real-World Application:**

- Example of successful implementation in a clinic or hospital.
- Feedback from healthcare professionals.
- Impact on diagnosis speed and accuracy.

# Benefits

**For Healthcare Providers:**

- Reduces diagnostic workload.
- Enhances diagnostic accuracy.

**For Patient:**

- Faster diagnosis leads to quicker treatment.
- Reduces the risk of complications from delayed treatment.

# Thank You