FACE MASK DETECTION SYSTEM

USER MANUAL

Ananya Adivi

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ACKNOWLEDGEMENTS

First of all, I would just like to say that I am grateful to everyone who has helped me gain the opportunity to create this project and be able to enhance my own skills. Thank you to my parents, mentors, fellow peers (and YouTube videos) for helping me work towards achieving greater things.

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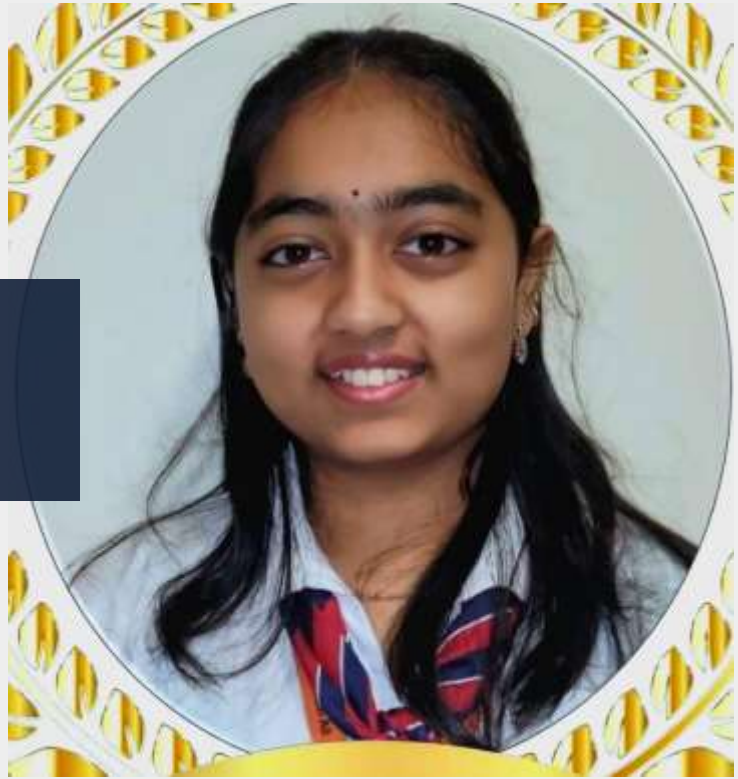

ABOUT ME!

Hello!
My name is Ananya Adivi and I'm 17 years old, and I' currently in Year 12.
I'm from Hyderabad, India, but I'm brought up in Dubai, UAE.
I have a number of interests like Art and Reading, but Coding is something I put a lot of effort in learning.
This opportunity has led me to learn various things about AI and how to implement it in creating applications, like the one I've focused on for this project.

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INTERNSHIP JOURNEY

The internship with Clevered has been very helpful in venturing deep into the world of AI.
I've learnt many things, from voice recognition to object detection. With the tools and aid provided in the mentor sessions, I was able to enquire and learn many things that led me to create my project.

04 | ABOUT MY APPLICATION

My app focuses on Face Mask Detection. I've used object detection as my subject to implement. Face Mask Detection caught my eye, as it was a necessary system during COVID-19. I was always intrigued to find out how the system was created, and this project portrays my interest in the subject.

Main Menu

My app consists of two main parts:

- Detecting if a person in an image is wearing a mask
- Live face mask detection

These two functions are important to my project as they showcase the main goal of the project. They are very straightforward and easy to use.

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HOW TO OPERATE MY APPLICATION

Function 1 - DETECT MASK
Function 2 - LIVE DETECTION
Demo

FUNCTION 1

DETECT MASK

This function takes the selected image and runs the code written to detect the mask

FUNCTION 2

REAL TIME DETECTION

This function opens the web camera from the user's device and detects whether the person is wearing a face mask or not.

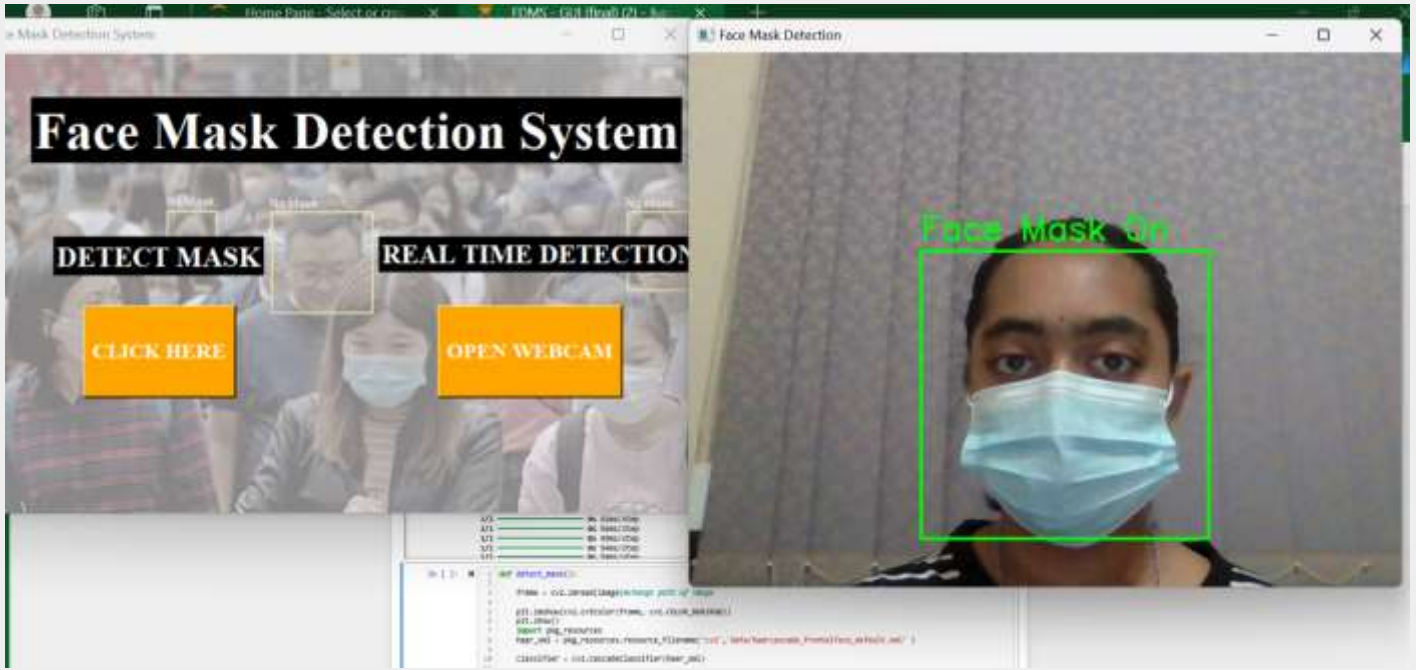
It is important to note that the code does not work properly if there is no proper lighting*

DEMO - REAL TIME DETECTION

WITHOUT MASK

DEMO - REAL TIME DETECTION

WITH MASK



DEMO - DETECT MASK

USING AN IMAGE - WITHOUT MASK

OUTPUT:

IMAGE CHOSEN:

DEMO - DETECT MASK

USING AN IMAGE - WITH MASK

OUTPUT:

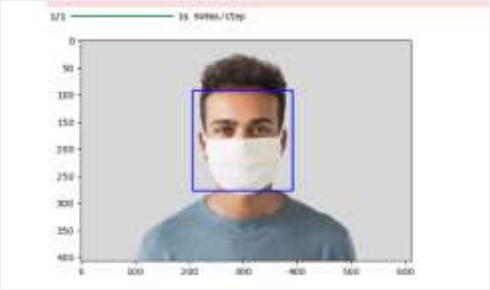
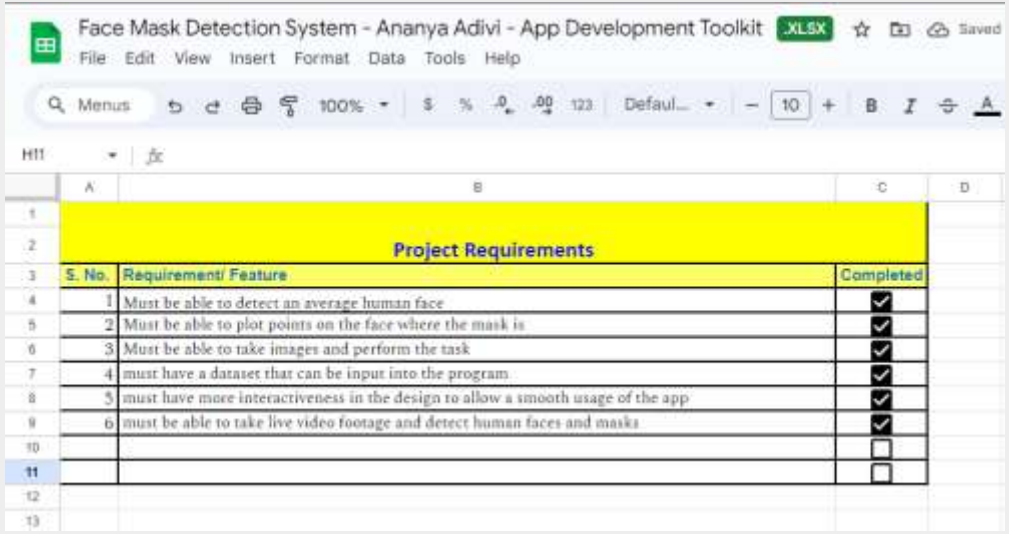


IMAGE CHOSEN:

06 | APP DEVELOPMENT TOOL-KIT

PROJECT REQUIREMENTS & DESIGN USER INTERFACE



Face Mask Detection System - Ananya Adivi - App Development Toolkit .XLSX

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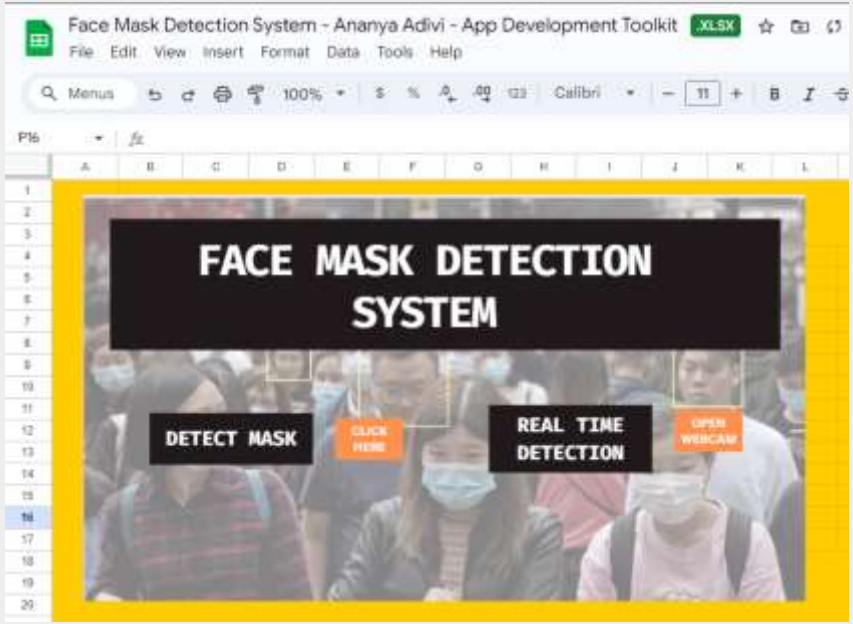
	S. No.	Requirement/ Feature	Completed
		Project Requirements	
	1	Must be able to detect an average human face	☑
	2	Must be able to plot points on the face where the mask is	☑
	3	Must be able to take images and perform the task	☑
	4	must have a dataset that can be input into the program	☑
	5	must have more interactiveness in the design to allow a smooth usage of the app	☑
	6	must be able to take live video footage and detect human faces and masks	☑
			☐
			☐

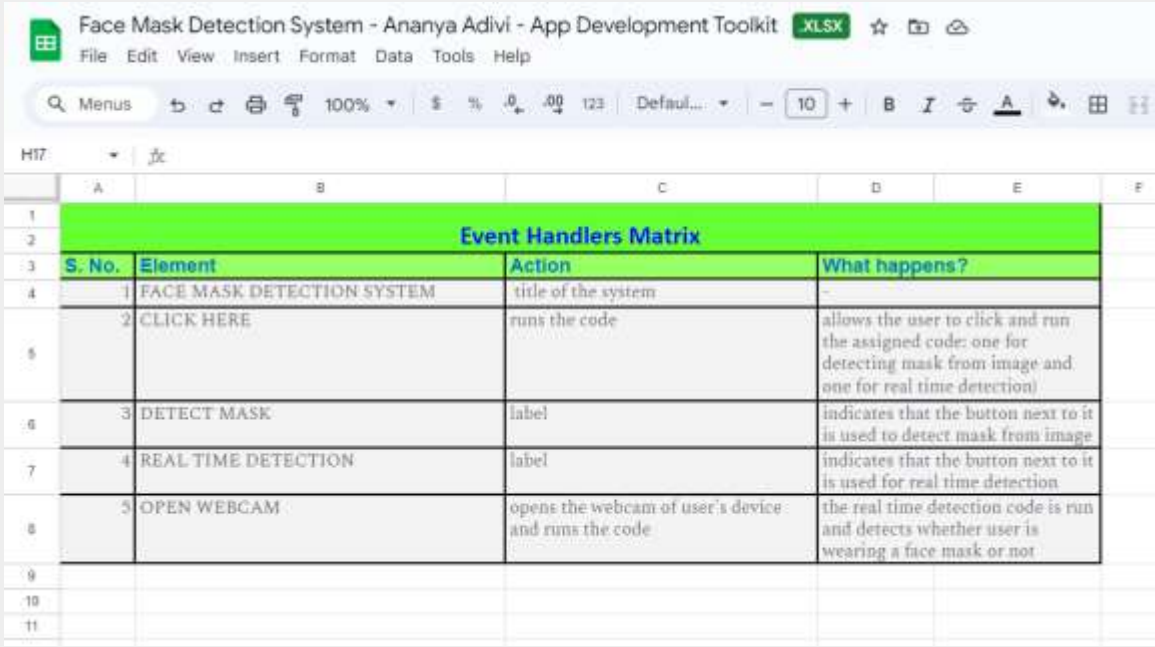


Link for Tool-Kit spreadsheet:

https://docs.google.com/spreadsheets/d/1AC4uODQuCjYJdXQMbvCZCrb-XGS6ODy7/edit?usp=sharing&ouid=115856861494110766051&rtpof=true&sd=true

06 | APP DEVELOPMENT TOOL-KIT

EVENT HANDLERS



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Menus 100% Defaul... 10

H17

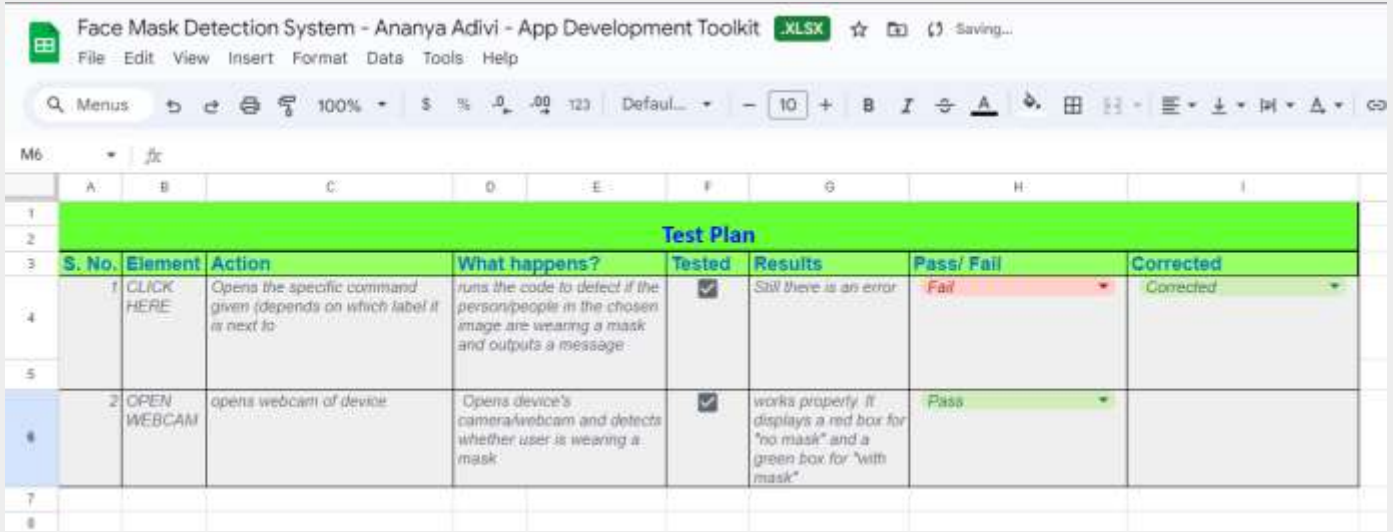
	A	B	C	D	E	F
1						
2		Event Handlers Matrix				
3		S. No.	Element	Action	What happens?	
4		1	FACE MASK DETECTION SYSTEM	title of the system	-	
5		2	CLICK HERE	runs the code	allows the user to click and run the assigned code: one for detecting mask from image and one for real time detection)	
6		3	DETECT MASK	label	indicates that the button next to it is used to detect mask from image	
7		4	REAL TIME DETECTION	label	indicates that the button next to it is used for real time detection	
8		5	OPEN WEBCAM	opens the webcam of user's device and runs the code	the real time detection code is run and detects whether user is wearing a face mask or not	
9						
10						
11						

Link for Tool-Kit spreadsheet:

https://docs.google.com/spreadsheets/d/1AC4uODQuCjYJdXQMbvCZCrb-XGS6ODy7/edit?usp=sharing&ouid=115856861494110766051&rtpof=true&sd=true

06 | APP DEVELOPMENT TOOL-KIT

TEST PLAN



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File Edit View Insert Format Data Tools Help

Saving...

Menus 100% $ % .0 .00 123 Defaul... 10 B I A

M6

	A	B	C	D	E	F	G	H	I
1									
2	Test Plan								
3	S. No.	Element	Action	What happens?		Tested	Results	Pass/ Fail	Corrected
4	1	CLICK HERE	Opens the specific command given (depends on which label it is next to	runs the code to detect if the person/people in the chosen image are wearing a mask and outputs a message		☑	Still there is an error	Fail	Corrected
5									
6	2	OPEN WEBCAM	opens webcam of device	Opens device's camera/webcam and detects whether user is wearing a mask		☑	works properly. It displays a red box for "no mask" and a green box for "with mask"	Pass	
7									
8									

Link for Tool-Kit spreadsheet:

https://docs.google.com/spreadsheets/d/1AC4uODQuCjYJdXQMbvCZCrb-XGS6ODy7/edit?usp=sharing&ouid=115856861494110766051&rtpof=true&sd=true

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CONTACT ME!

If you have any further queries or suggestions, please contact me via the following email:

ananya_adivi@outlook.com

THANK YOU! :)