Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result	Pass/Fail	Remarks

Test Case ID	Test Scenario	Test Steps	Expected Result
REG-001	Register with valid email & image	Fill email, choose image, click submit	Registration success, redirected to Login
REG-002	Register with already registered email	Fill same email again	Toast: "Email already exists"
REG-003	Register without selecting image	Fill email only, no image	Toast: "Please provide both email and image"
REG-004	Register without email	Upload image only	Toast: "Please provide both email and image"
REG-005	Upload unsupported file type	Try uploading .pdf or .exe	Toast: "Invalid file type" or appropriate validation

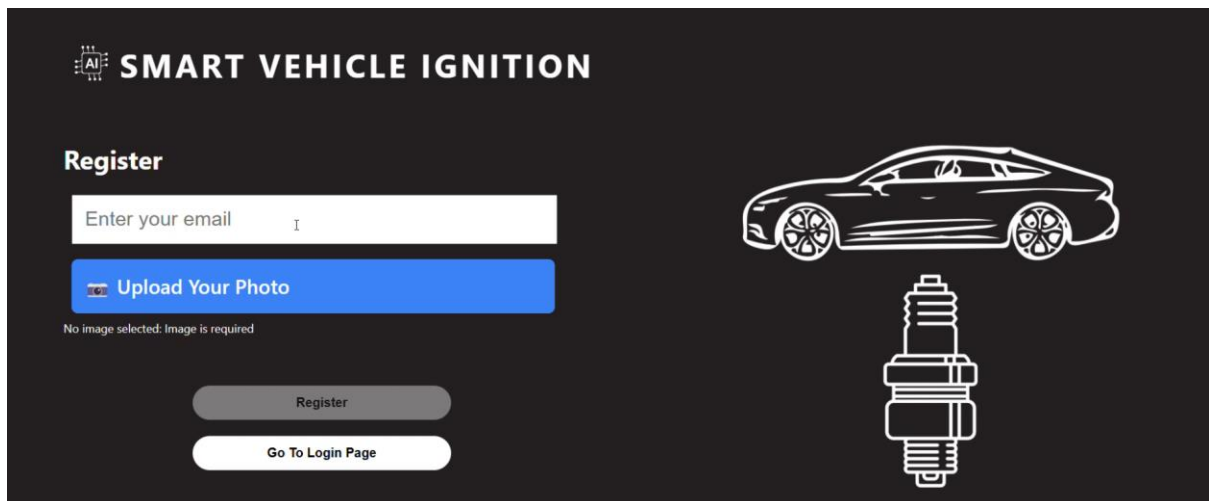| Test Case ID	Test Scenario	Test Steps	Expected Result
LOGIN-001	Login with registered email	Fill email and submit	Shows fetched image on homepage
LOGIN-002	Login with unregistered email	Enter random email	Toast: "User not found"
LOGIN-003	Login with no input	Leave email blank	Toast: "Please enter your email"

Test Case ID	Test Scenario	Test Steps	Expected Result
CAPTURE-001	Capture and match with registered face	Click capture image	Message: "Face matched", vehicle status = UNLOCKED
CAPTURE-002	Capture with unmatched face	Try different person	Message: "Face not matched", image uploaded to `unrecognized-people`
CAPTURE-003	Capture without connecting ESP32	Unplug device and click capture	Message: "Please connect the ESP32 to the laptop"

Test Case ID	Test Scenario	Test Steps	Expected Result
STOP-001	Stop vehicle with ESP32 connected	Click "Stop Vehicle"	Message: "Vehicle stopped."
STOP-002	Stop vehicle without ESP32	Unplug ESP32 and click	Still shows "Vehicle stopped." (no crash)

Test Case ID	Test Scenario	Test Steps	Expected Result
UI-001	Navigate between Guest > Register > Login > Main	Click through all pages	Smooth transitions, header consistent
UI-002	Submit button loading state	Submit any form	Shows loading spinner, disables multiple clicks
UI-003	Toast messages display correctly	Trigger success/error	Toast appears in top-right and disappears after 3–5s
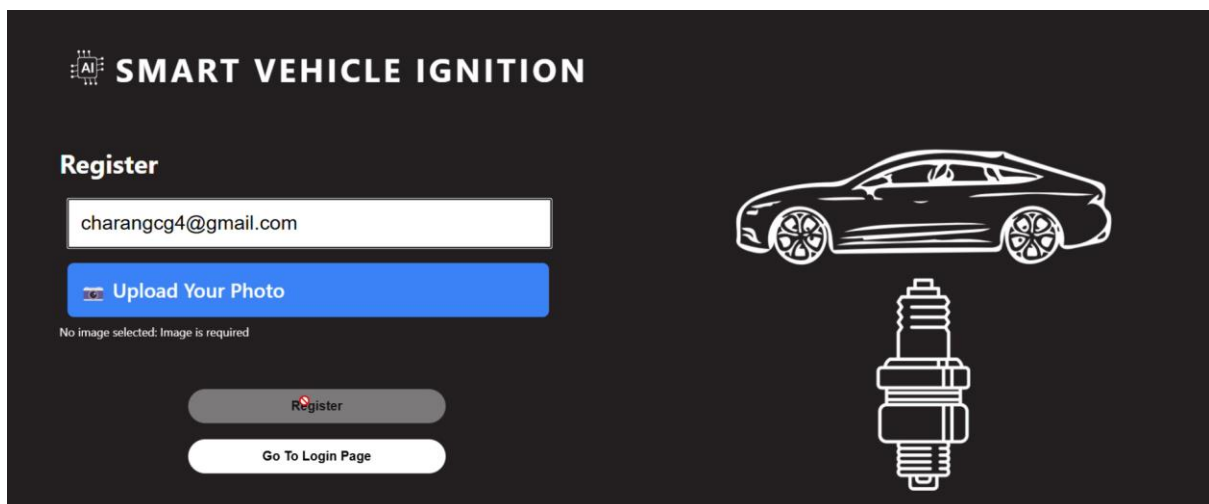
Test Case ID	Test Scenario	Test Steps	Expected Result
GCP-001	Confirm image uploaded on registration	Check GCP console after registering	File appears under `registration_images/user_id/`
GCP-002	Confirm unmatched face is stored	Try unmatched capture	Image stored in `unrecognized-people/user_id/` folder

REGISTER:

Register button disabled when email and photo is empty

Register button disabled when image is not uploaded

Toast message when a file other than image was uploaded
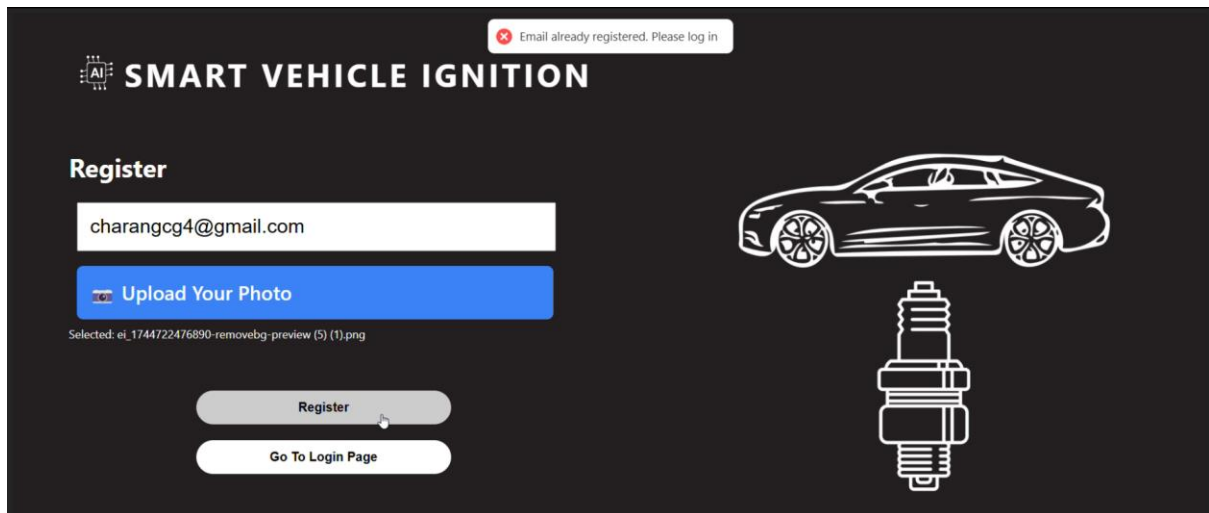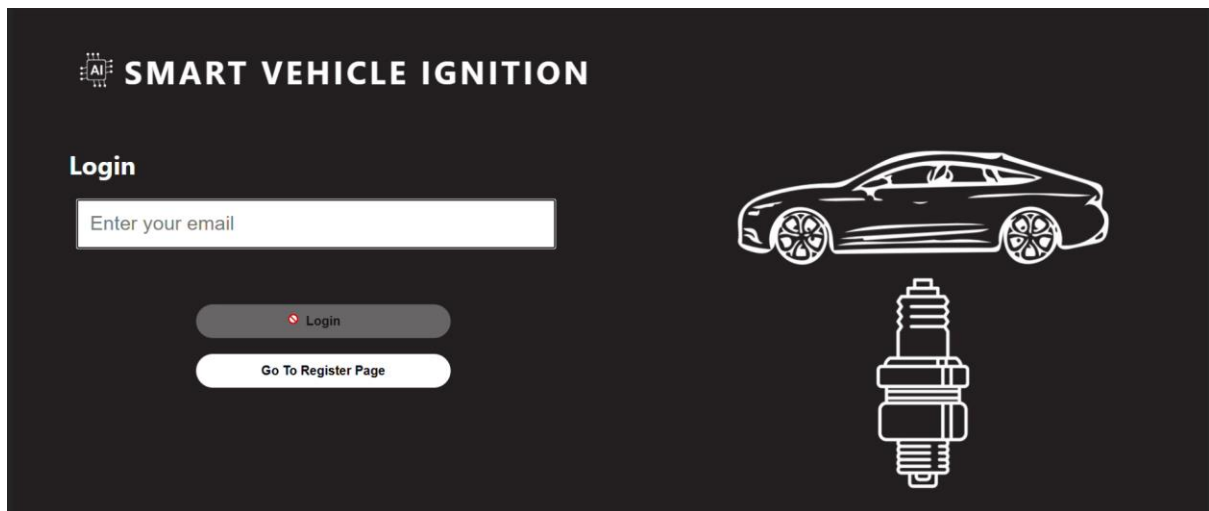
Email already exists
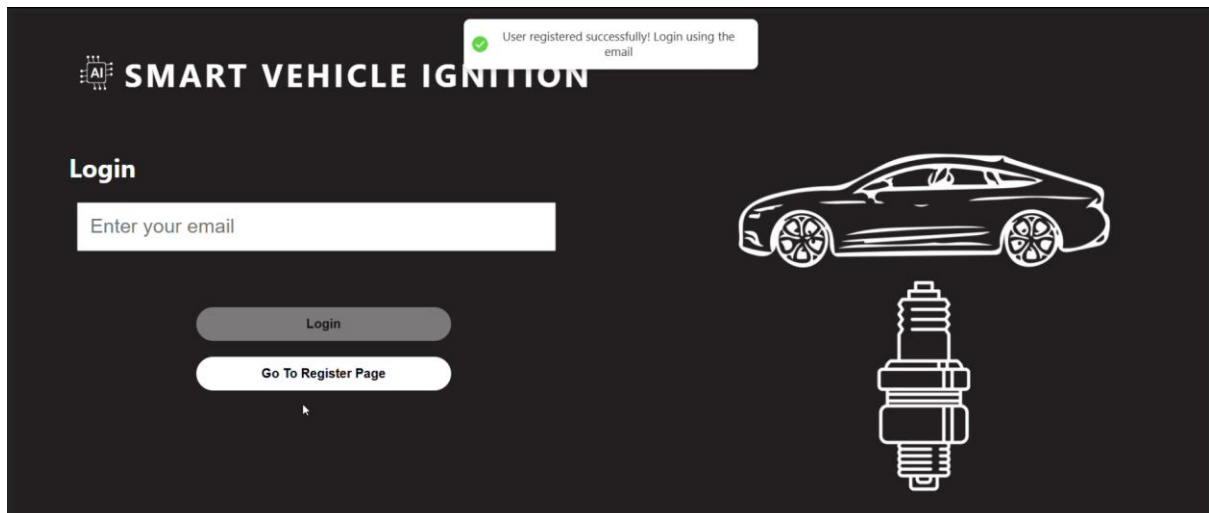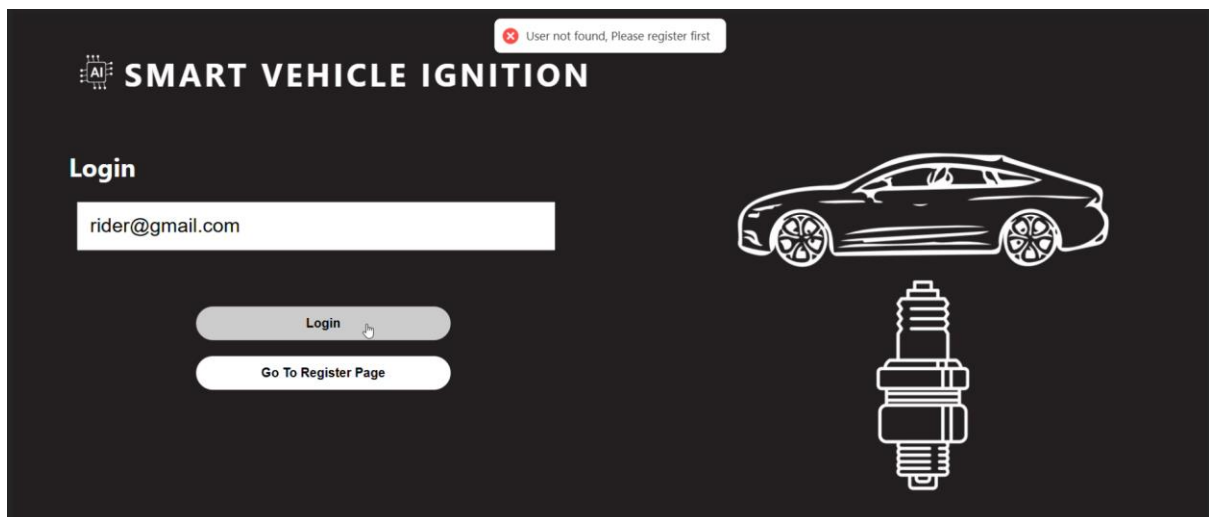
User registered successfully, redirected to login page

LOGIN:
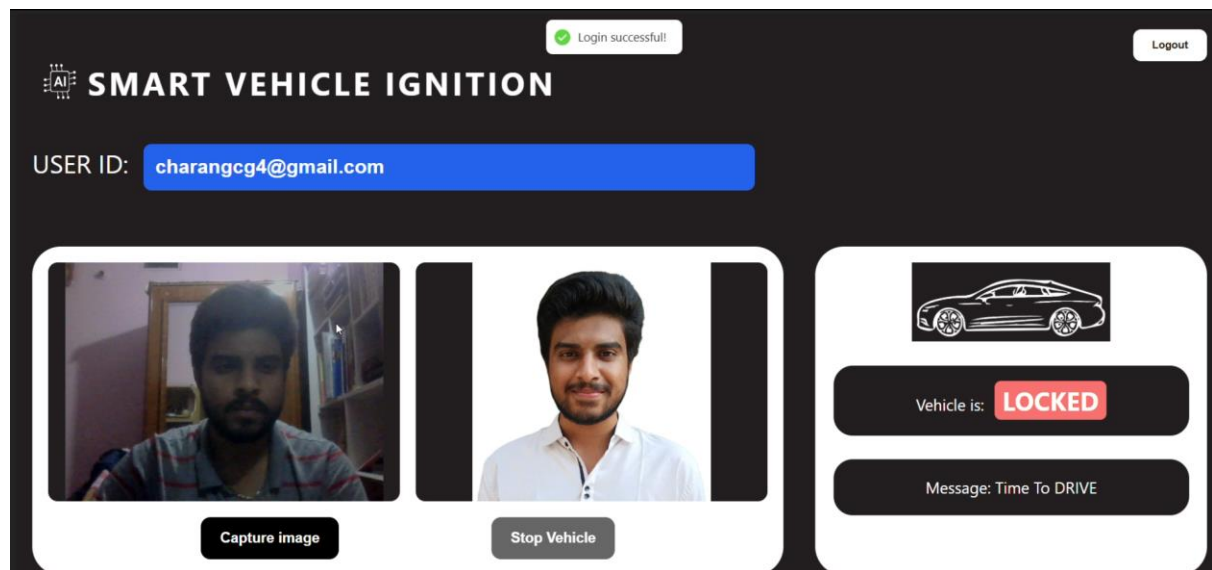

Login button disabled when email field is empty

User not found message

Login successful message, user redirected to homepage