

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

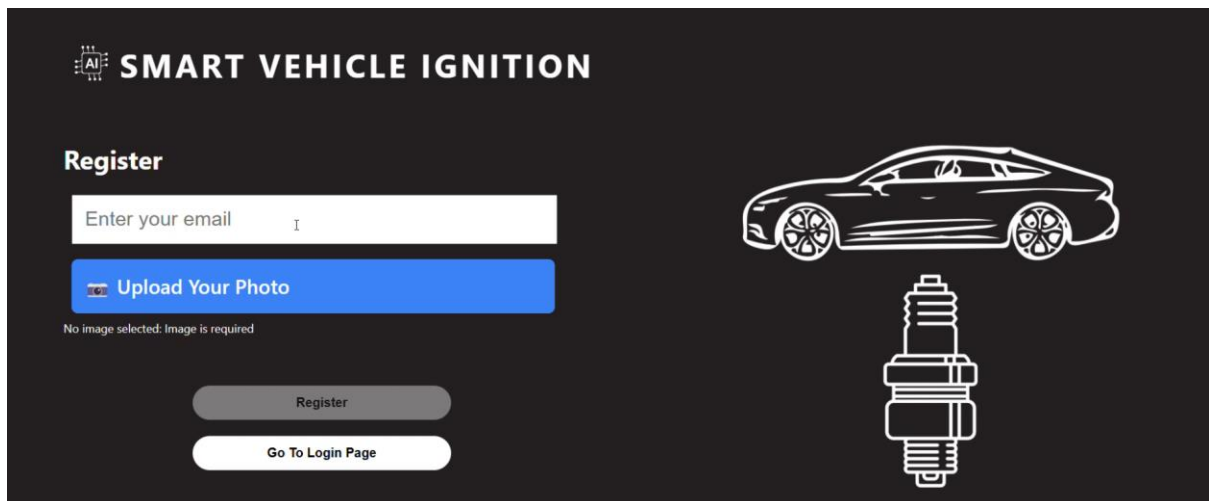
Test Case ID	Test Scenario	Test Steps	Expected Result
CAPTURE-001	Capture and match with registered face	Click capture image	Message: "Face matched", vehicle status = UNLOCKED
CAPTURE-002	Capture with unmatched face	Try different person	Message: "Face not matched", image uploaded to unrecognized-people
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

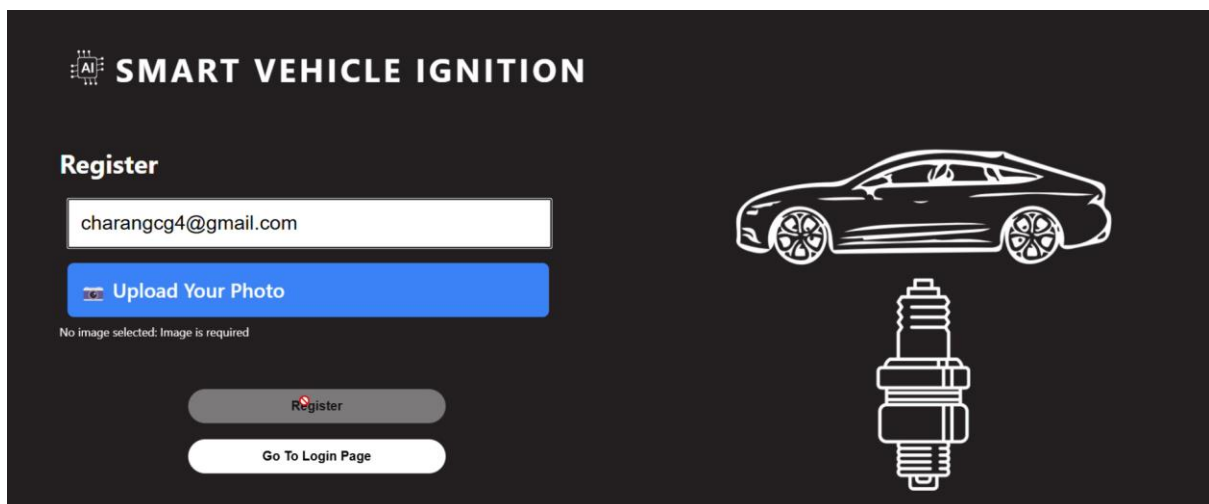
Test Case ID	Test Scenario	Test Steps	Expected Result
GCP-001	Confirm image uploaded on registration	Check GCP console after registering	File appears under <code>registration_images/user_id/</code>
GCP-002	Confirm unmatched face is stored	Try unmatched capture	Image stored in <code>unrecognized-people/user_id/</code> folder

REGISTER:



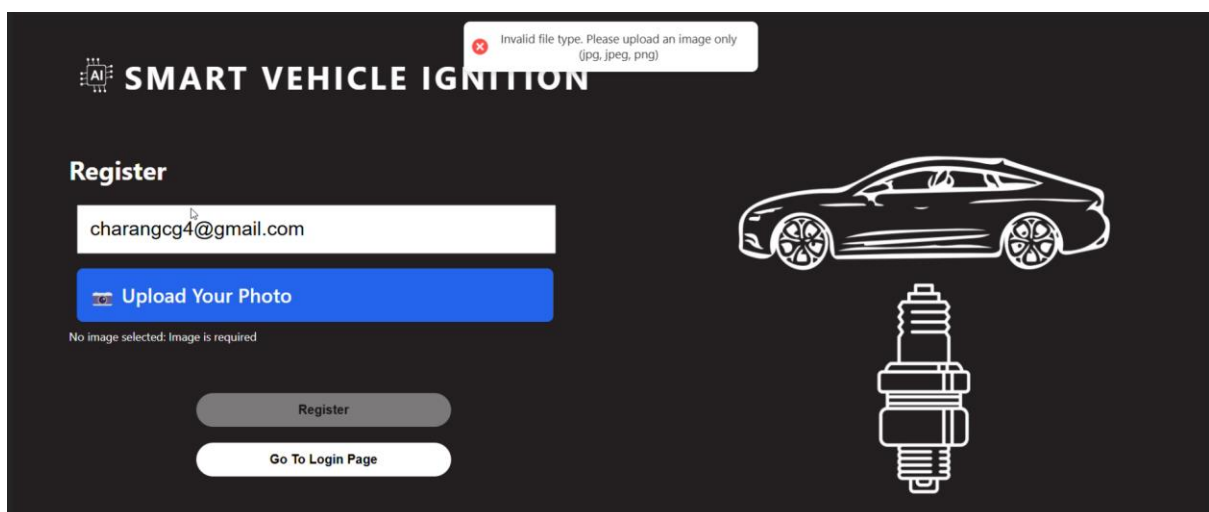
The image shows a registration form for 'SMART VEHICLE IGNITION'. The form has a dark background with white text. At the top left is a logo with 'AI' and a circuit-like border. The title 'SMART VEHICLE IGNITION' is in large, bold, white letters. Below the title, the word 'Register' is in bold. There are two input fields: 'Enter your email' with a cursor in it, and 'Upload Your Photo' with a camera icon. Below the photo upload field, it says 'No image selected: Image is required'. At the bottom are two buttons: 'Register' (disabled, grey) and 'Go To Login Page' (active, white with black text). To the right of the form is a white line-art illustration of a sports car and a spark plug below it.

Register button disabled when email and photo is empty



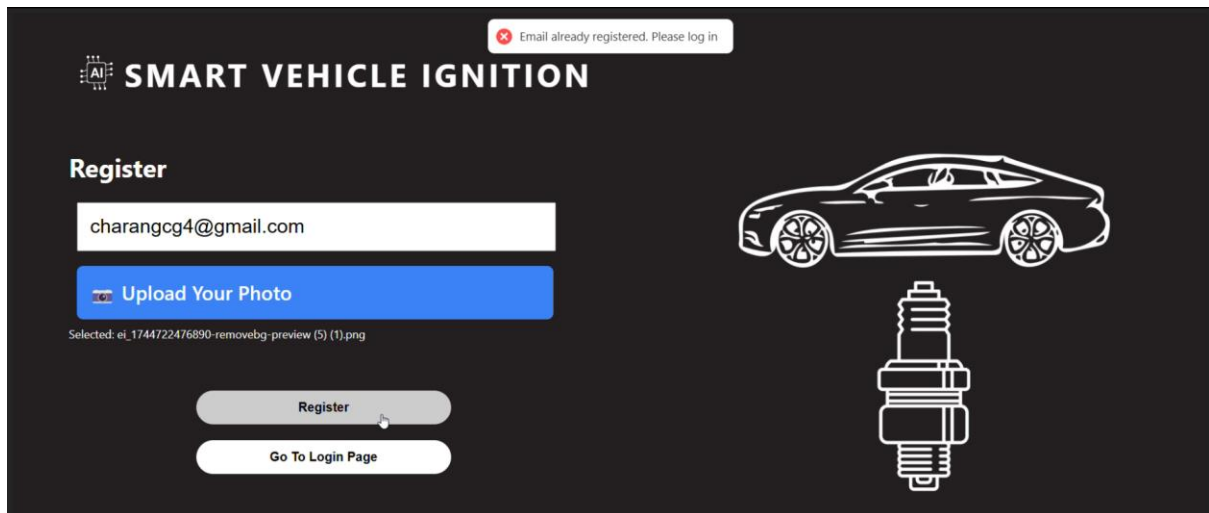
This image shows the same registration form, but the email field is now filled with 'charangcg4@gmail.com'. The 'Register' button now has a red 'x' icon over it, indicating it is still disabled. The 'Go To Login Page' button remains active. The rest of the form and the car/spark plug illustration are the same as in the previous image.

Register button disabled when image is not uploaded

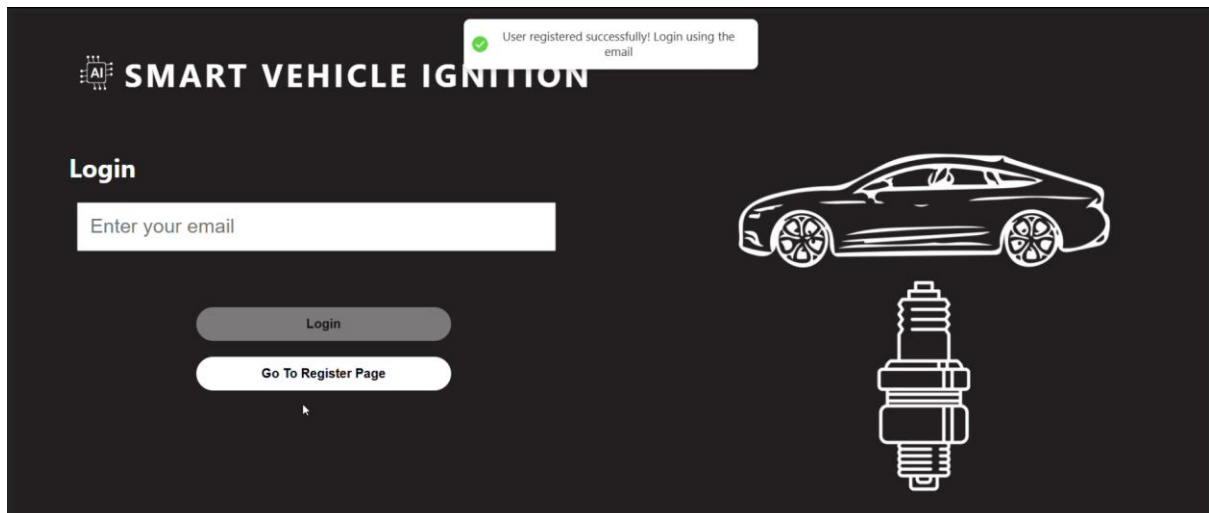


This image shows the registration form with the email filled and a toast message at the top. The toast message is a white box with a red 'x' icon and the text: 'Invalid file type. Please upload an image only (jpg, jpeg, png)'. The 'Register' button is still disabled with the red 'x' icon. The 'Go To Login Page' button is active. The rest of the form and the car/spark plug illustration are the same as in the previous images.

Toast message when a file other than image was uploaded

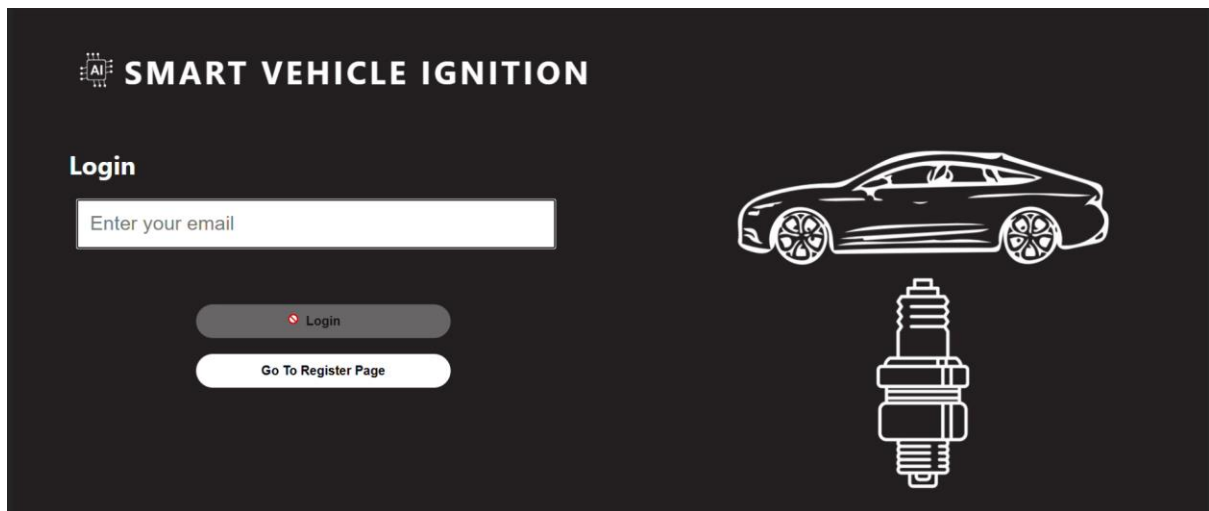


Email already exists



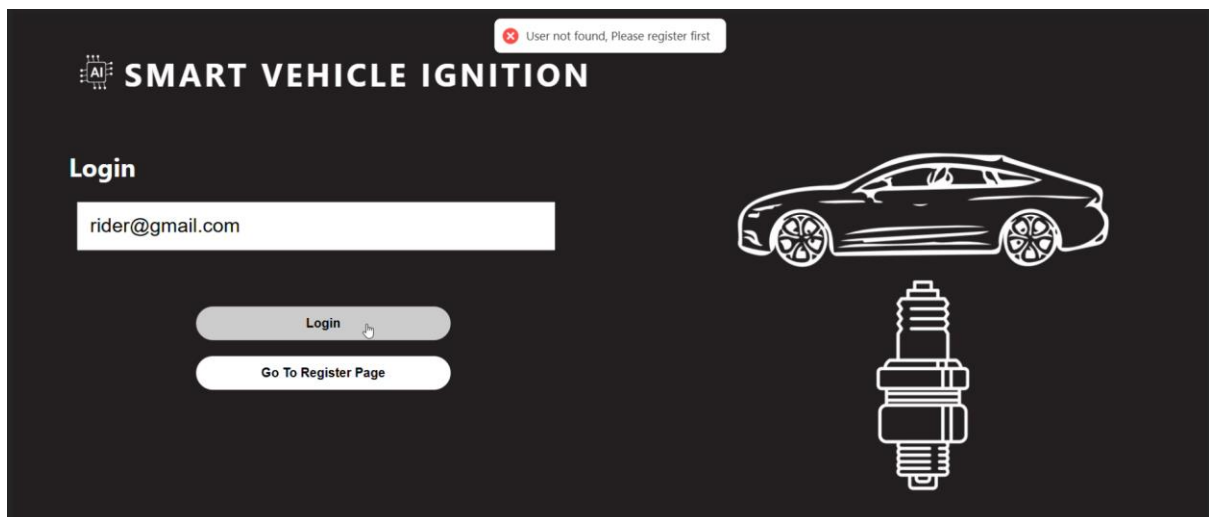
User registered successfully, redirected to login page

LOGIN:



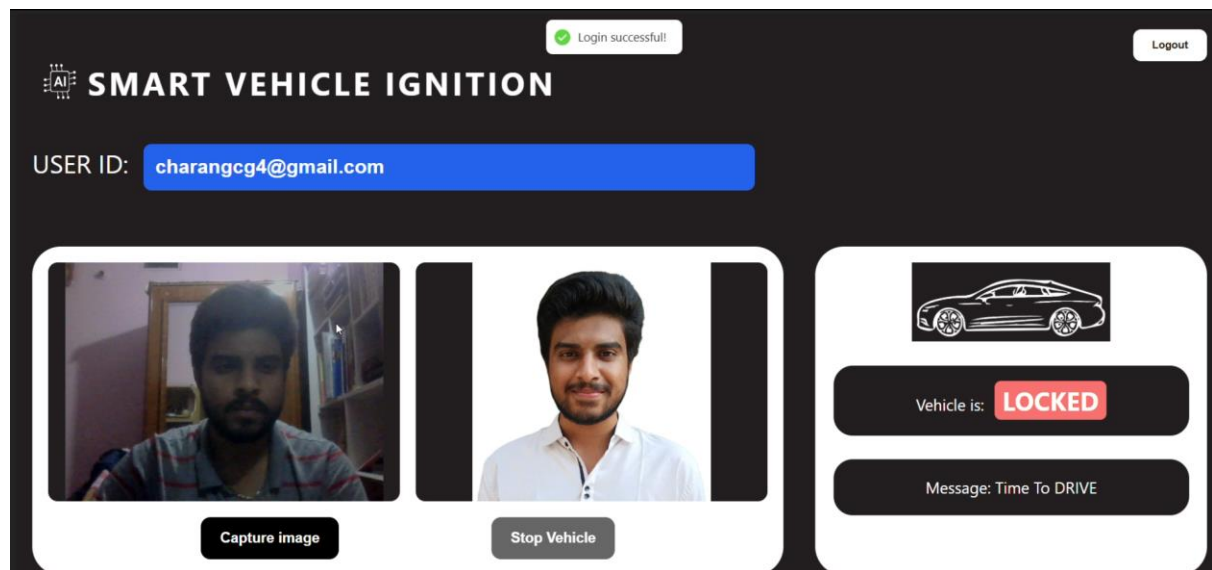
The image shows a login page for 'SMART VEHICLE IGNITION'. The page has a dark background. At the top left is a logo with the letters 'AI' inside a square grid, followed by the text 'SMART VEHICLE IGNITION'. Below this is the heading 'Login'. There is a text input field with the placeholder text 'Enter your email'. Below the input field are two buttons: a grey 'Login' button with a red error icon and a white 'Go To Register Page' button. To the right of the login form is a white line-art illustration of a sports car and a spark plug below it.

Login button disabled when email field is empty



This image shows the same login page as the previous one, but with an email address entered and an error message displayed. The text input field now contains 'rider@gmail.com'. The 'Login' button is now active and white, with a mouse cursor hovering over it. The 'Go To Register Page' button remains white. A new error message box appears at the top right, containing a red 'x' icon and the text 'User not found, Please register first'. The 'SMART VEHICLE IGNITION' logo and the car/spark plug illustration are still present.

User not found message



Login successful message, user redirected to homepage