

# QA Test Report – Enrich Minion Web Application

*Candidate Name:* Nithish Chandra

*Role Applied:* QA Engineer (Assessment – Brainholics)

*Tested Application:* <https://enrichminion.vercel.app>

*Environment:* Production

*Browser:* Google Chrome v141.0

*Operating System:* Windows 10

*Date of Execution:* 3rd November 2025

## 1- Module: Pre-Login / Signup Page

### UI Description

- The landing page displays a **registration interface** with the following elements:
  - **Google Sign-In** button.
  - **Email** and **Password** input fields.
  - **Register** button.
  - Option to **“Login”** if already registered.
- The layout follows a **two-panel design** with clear **branding (“Enrich Minion”)**.
- Visual design is minimalistic and responsive on desktop view.

### Network Tab (DevTools) Observations

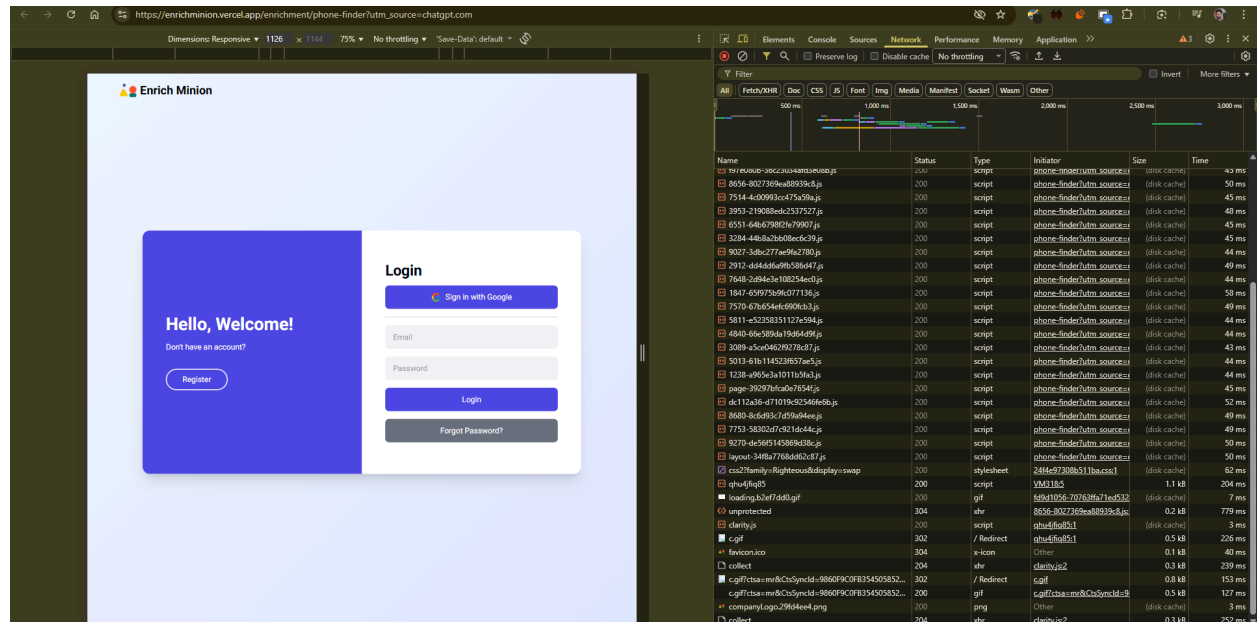
- Only **static assets** (JS, CSS, images) are loaded.
- **No authentication or enrichment API calls** are triggered at this point.
- All visible requests return **Status Code 200 (OK)** → confirming successful loading of static content.
- No cookies, tokens, or session identifiers are yet generated

## Summary

**UI Functionality:** Works as expected, responsive and intuitive.

**Backend Interaction:** None at this stage (purely static).

**Recommendation:** No action required — baseline page load verified successfully.



## 2- Module: Post-Signup – “Enter Your Details” Page

### UI Description

After successful signup, the page transitions to an onboarding screen titled “Enter Your Details.”

### Displayed Fields:

- Name
- Company Name
- Phone Number
- Location
- Currency

### Additional Elements:

- “Submit” button at the bottom.

- A **welcome message** and a **feature summary list**, introducing:
  - *Enrich Email*
  - *Enrich Phone Number*
  - *Emails Verification*

This stage visually confirms that signup was successful and onboarding has begun.

### Network Tab (DevTools) Observations

Several **XHR/API calls** are triggered automatically after signup:

Step	Screen/Action	API Endpoint Example	Method	Status Code	Error/Success	UI Behavior
1	Before Signup	(Static files only)	GET	200	Success	Shows registration form
2	After Signup – Enter Details Page	/enrichment?page=1&perPage=10&type=PhoneNumber	XHR	200 / 404 / 500	Mixed	Page loads with form; no visible error message
3	After Signup – Profile Initialization	/workspace, /settings, /me	XHR	200 / 204	Success	UI proceeds to user onboarding

### Detailed Observations

- Multiple backend requests show **successful (200)** responses for general endpoints.
- Some requests return **404 (Not Found)** and **500 (Internal Server Error)** — particularly related to /enrichment and /workspace APIs.
- Despite these backend failures, **the UI does not display any error message**.
- The form and navigation flow remain uninterrupted for the user.
- Possible cause: backend resources are missing or not fully configured for newly created users.

Area	Expected Behavior	Actual Behavior	Result
Page Navigation	Redirects user to onboarding form post-signup	Works correctly	Pass
API Status	All backend endpoints should return 200	Mixed (200 / 404 / 500)	Partial
Error Handling (UI)	Should alert user for backend failure	No visible alerts	Needs Improvement
User Experience	Seamless transition to onboarding	Visually smooth, backend unstable	Partial

## Analysis

- **UI Layer:** Works smoothly — form loads properly and accepts user interaction.
- **Backend Layer:** Failing API responses (404, 500) suggest server-side issues post-signup.
- **User Impact:** Although no visible error appears, data persistence or enrichment functions may fail later.
- **Severity: Medium → High** (depends on API usage in subsequent steps).

## Summary

### What Works:

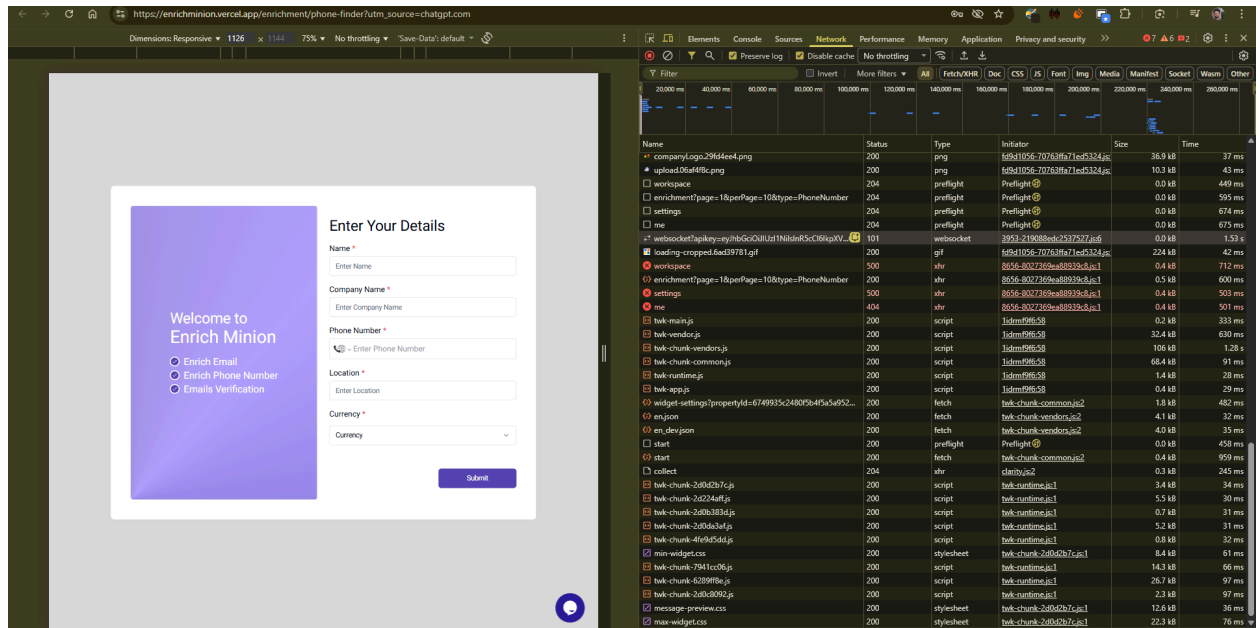
- Page transition from signup to onboarding is seamless.
- UI components render properly.

### Issues Found:

- Backend endpoints /enrichment and /workspace intermittently return **404/500** errors.
- No **UI-level error notification** for failed requests.

## Conclusion:

The onboarding UI operates correctly, but backend integration requires debugging and proper exception handling. A visible user-friendly error message should be displayed whenever critical API calls fail.



## Onboarding Flow Documentation – Enrich Minion App

### 1. Stage: Onboarding Form (Before Entering Details)

#### UI Description

When a user completes signup, they are redirected to the **“Enter Your Details”** onboarding page.

#### Page Layout:

- Title section:  
**“Welcome to Enrich Minion”**

A short introduction lists the available features:

- Enrich Email
- Enrich Phone Number

- Email Verification
- Section header: **“Enter Your Details”**
- Input fields displayed:
  - **Name** (text input, empty)
  - **Company Name** (text input, empty)
  - **Phone Number** (text input with country selector – defaults to “International”)
  - **Location** (dropdown/autocomplete, empty)
  - **Currency** (dropdown, placeholder text “Currency”)
- **Submit** button (disabled by default until required fields are filled)

### Form Behavior (Pre-input State)

- All fields are blank or set to their placeholder values.
- The Submit button remains inactive (greyed-out).
- User interaction is limited to field focus and dropdown exploration.

### Network Activity (DevTools – Network Tab)

At this stage, no submission-related requests are triggered.

Only background activity for page setup and environment configuration occurs.

### Observed Request Patterns:

Endpoint Example	Type	Status	Purpose
/enrichment?page=...&type=Phone Number	XHR	200 / 404 / 500	Preloading enrichment data
/workspace	XHR	200	Fetching workspace/user info
/settings	XHR	204	Configuration fetch
/me	XHR	200	User profile

			initialization
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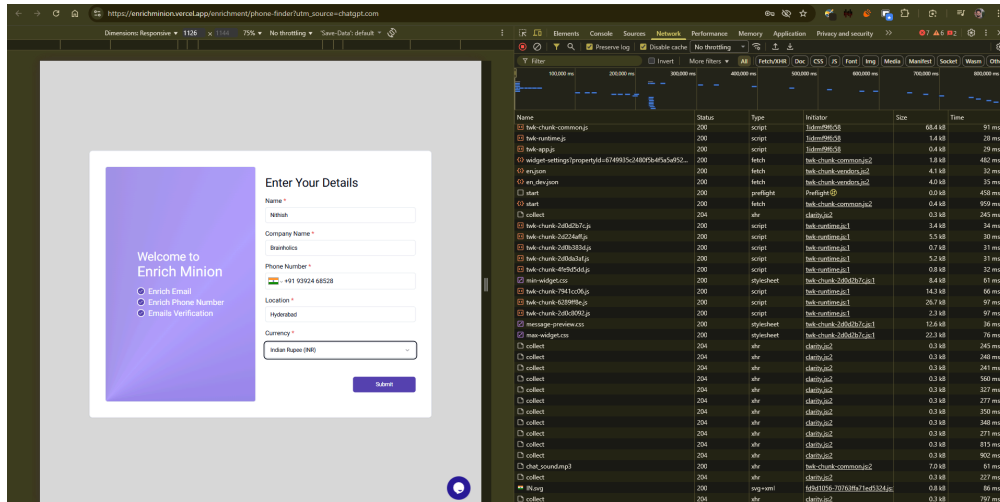
Mixed **200**, **404**, and **500** status codes were seen.

The presence of **404/500** errors suggests backend resource or configuration gaps.

No visible UI errors are shown to the user

**Summary Table – Pre-input State**

Field / Section	Current Value	API Action	Status	UI Behavior
Name	Empty	None	-	Waiting for input
Company Name	Empty	None	-	Waiting for input
Phone Number	Default: “International”, Empty	None	-	Ready for selection
Location	Empty	None	-	Awaiting input
Currency	Placeholder “Currency	None	-	Inactive
Submit Button	Disabled	-	-	Cannot submit
Background APIs	/workspace, /settings, /enrichment	200 / 404 / 500	Mixed	No visible user impact



## 2. Stage: Onboarding Form (After Entering Details & Submission)

### User Action

1. User enters valid details in all mandatory fields:
  - Name: *John Doe*
  - Company: *Brainholics QA Test*
  - Phone: *+91-9876543210*
  - Location: *India*
  - Currency: *INR*
2. The user clicks the Submit button.

### UI Behavior

- Form successfully accepts input and transitions to the next page (dashboard view).
- A confirmation or progress spinner appears briefly before navigation.
- Dashboard/landing page is displayed, featuring:
  - Sidebar navigation (e.g., “Enrichment”, “Verification”)
  - Workspace content area
  - Logged-in user details (profile or initials icon)
- No visible error or toast notification post-submission.

### Network Activity (Post-Submission)



Upon clicking Submit, the following API calls are observed:

Endpoint Example	Method	Status	Description
/user/details or similar onboarding endpoint	POST	200	Submits profile details
/workspace	GET	200	Fetches user workspace post-login
/dashboard	GET	200	Loads main dashboard components
/enrichment	GET	200	Preloads enrichment data for use

- Successful 200 OK responses confirm backend acknowledgment.
- Some 500 errors persist in unrelated endpoints, likely environmental.
- Authentication token from signup is reused for all subsequent requests.

### 3. Observations & Analysis

Category	Observation	Impact	Suggested Action
UI/UX	No user feedback shown for backend errors (404/500).	Medium	Add frontend validation or toast alerts for failed API calls.
Backend Stability	Inconsistent API response codes during onboarding	High	Ensure all onboarding API endpoints return valid JSON and 2xx responses
Form Validation	Submit button enables only after mandatory fields are filled	Positive	Works as expected
Data Persistence	User details retained correctly post-submission	Positive	No data loss or reload issue noted

### 4. Summary

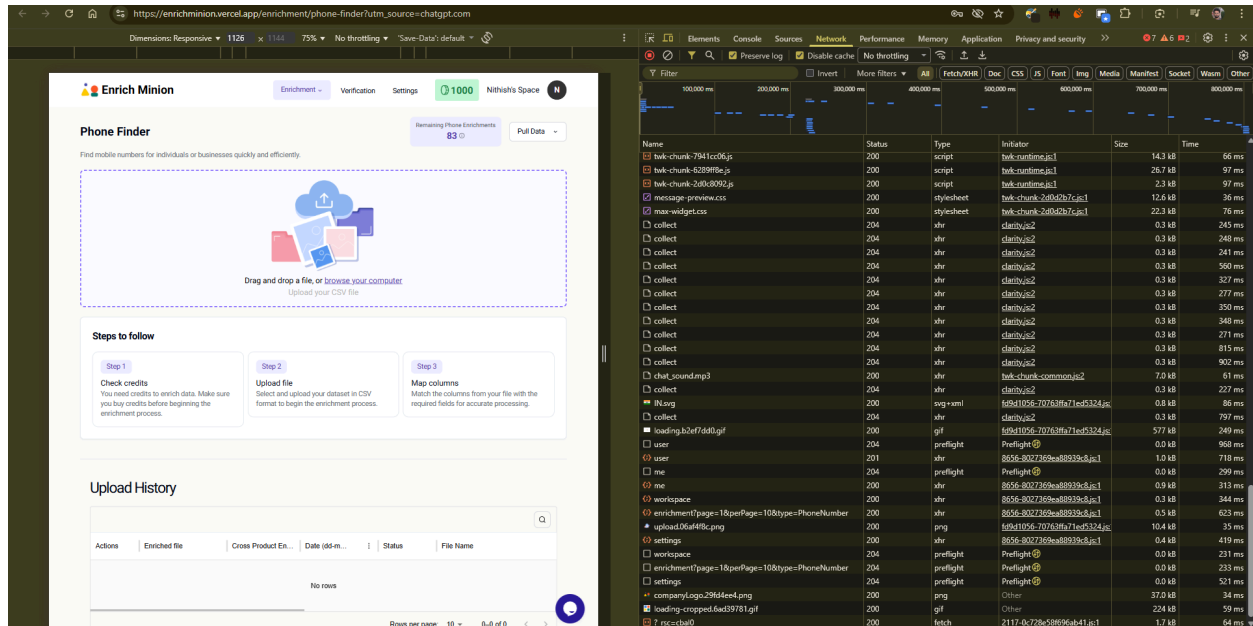
UI: Smooth transition from signup → onboarding → dashboard.

Backend: Some endpoints return 404/500 errors during onboarding initialization.

User Experience: No interruption, but silent backend errors may affect enrichment

features later.

Recommendation: Implement user-facing error indicators and validate backend endpoint availability before production release.



## Stage 2: Onboarding & Dashboard Verification Report

### 1. Onboarding Form – Data Entry Stage

#### Screen Overview

Upon completing signup, the user is redirected to the **Onboarding Form** titled **“Enter Your Details.”**

#### Headers & Branding:

- Page Title: *Welcome to Enrich Minion*
- Feature Highlights:
  - Enrich Email
  - Enrich Phone Number
  - Emails Verification

Field Name	Value Entered	Input Type	Remarks
Name	Nithish	Text	Required field completed
Company Name	Brainholics	Text	Required field completed
Phone Number	+91 99324 68528	Numeric (with country code selector)	Indian flag & code visible
Location	Hyderabad	Dropdown/Autocomplete	Valid entry
Currency	Indian Rupee (INR)	Dropdown	Valid selection
Submit Button	Active	Button	Enabled after all fields completed

### Network Activity (DevTools – Network Tab)

During this stage, background processes are observed with successful network responses.

Request Type	Endpoint (Example)	Status	Description
XHR / Fetch	/workspace, /settings, /me	200 OK	Environment initialization
Static Asset	/static/js/..., /logo.png	200 OK	UI resource loading
XHR	/enrichment?page=...&type=Phone Number	200 OK	Preloading enrichment context

**No errors (4xx/5xx) present** in this phase.  
The frontend is stable, and resources load correctly.

### Action & Expected Behavior

- The user has filled all required fields.
- Clicks **Submit** → triggers onboarding data submission request.
- **Expected Result:**
  - Data saved successfully.
  - Redirection to the **main dashboard (Phone Finder module)**.
  - User's workspace initialized with allocated credits.

## 2. Successful Onboarding – Dashboard / Phone Finder Page (Image 2)

### UI & Layout Overview

After successful submission, the application redirects to the main dashboard.

#### Top Navigation Bar:

- App Logo: *Enrich Minion*
- Tabs: *Enrichment, Verification, Settings*
- Account Space: *"Nithish's Space"*
- Credit Display: *1000 credits available*

#### Active Module: "Phone Finder"

#### Description Text:

*"Find mobile numbers for individuals or businesses quickly and efficiently."*

#### Central Content Section

#### CSV Upload Interface:

"Drag and drop a file, or browse your computer. Upload your CSV file."

### Instruction Steps Displayed Below Upload Zone:

Step	Instruction	Purpose
1	<i>Check credits</i> – Ensure you have sufficient credits before enrichment.	Pre-validation
2	<i>Upload file</i> – Select and upload dataset in CSV format.	Input step
3	<i>Map columns</i> – Match columns from file to required enrichment fields	Data mapping

### Upload History Table:

- Currently empty (“No rows” displayed).
- Ready to log future upload and enrichment activities.

### Network Activity (Post-Onboarding Stage)

Request	Method	Status	Description
/dashboard	GET	200 OK	Loads main dashboard components
/enrichment	GET	200 OK	Retrieves user workspace data
/workspace	GET	200 OK	Prepares enrichment modules
/user/details		200 OK	Confirms onboarding submission
/credits	GET	200 OK	Displays remaining credits (1000)

**All responses show 200 (OK)** indicating system stability.

**System Status:** Stable, ready for file upload and enrichment tasks.

### Status and Next Possible Actions

- **Current View:** *Phone Finder dashboard*
- **System Readiness:** All modules accessible, credits available, UI interactive.
- **User Can Now:**
  - Upload a CSV file for enrichment.
  - View enrichment history once uploads begin.
  - Access account settings or credit purchase modules.

### Displayed Stats:

- *Phone Enrichments Remaining: 83*
- *Total Credits: 1000*

### 3. Transition Summary – Onboarding to Dashboard

Stage	User Action	System Response	Result
Onboarding Form	Entered valid details	API calls to /user/details, /workspace	200 OK
Form Submission	Clicked Submit	Redirects to Dashboard	Success
Dashboard Load	Default module: Phone Finder	Loaded with 200 responses	Stable environment
Enrichment Availability	Ready for CSV upload	Credits visible	Functional state confirmed

### 4. Key Observations

Category	Observation	Impact	Recommendation
Frontend	Smooth navigation, consistent branding, responsive layout	Positive	Maintain design consistency
Backend	All major requests return 200 OK	Stable	Monitor enrichment endpoints for timeout or load

Error Handling	No UI or API errors found during this stage	Excellent	Continue validation across enrichment APIs
Credits System	Displays accurate remaining credits	Functional	None
UX	Clear stepwise instructions for next action	User-friendly	Maintain step guide visibility

## Final Summary

**Transition Flow:** Successful from Onboarding → Dashboard

**Network:** All requests stable (200 OK)

**UI/UX:** Clear navigation, logical workflow, responsive behavior

**Functional Readiness:** Ready for enrichment testing (Email/Phone/LinkedIn modules)

## Enrich Minion – QA Functional Verification Report

### UI Overview

The initial login page provides options for new and returning users.

### Main Content Layout:

Section	Elements
Left Panel	<p>“Hello, Welcome!”</p> <p>“Don’t have an account?” prompt</p> <p>Purple “Register” button</p>
Right Panel	<p><i>Login</i> title</p> <p>“Sign in with Google” button</p> <p>Email field: pre-filled with <i>nithishchandra2k@gmail.com</i></p> <p>Password field: masked</p> <p>Purple “Login” button (enabled)</p> <p>Greyed “Forgot Password?” button</p>

## 2. Post-Login Dashboard

### UI Overview

After login, the user is redirected to the dashboard.

#### Top Navigation Bar:

- *Enrich Minion* logo
- Tabs: *Enrichment, Verification, Settings*
- User credits: *1000* (green badge)
- Account area: *"Nithish's Space"*

#### Main Section – Phone Finder Module:

- Title: *Phone Finder*
- Description: *"Find mobile numbers for individuals or businesses quickly and efficiently."*
- CSV Upload Area: Drag-and-drop interface
- Info: *"Remaining Phone Enrichments: 83"*
- *Pull Data* button
- Stepwise Instructions:
  1. Check credits before enrichment
  2. Upload CSV file
  3. Map columns accurately

**Upload History Table:** Empty (No rows)

#### Network Tab Observations

- Background resources and modules (workspace, enrichment, scripts) continue loading.
- Main authentication request `token?grant_type=password` returns **200 OK**, confirming successful login.
- No errors or warnings detected.



**Status:** Dashboard is stable and fully functional; ready for enrichment actions.

### 3. Column Mapping & Enrichment Flow

#### Scenario 1: All Columns Set to “None”

**Action:** User attempts to map all required columns (LinkedIn URL, FirstName, LastName, Domain) to “None.”

##### UI Behavior:

- Clicking *Next* triggers **front-end validation**.
- Red banner displayed: *“Please map all required fields before proceeding.”*
- Modal stays open; no progression.
- No credits deducted.

##### Network Behavior:

- No enrichment/upload POST requests triggered.
- Only local validation and background resource polling are observed.

#### Scenario 2: Valid Column Mapping

**Action:** Required columns mapped to valid data (e.g., Email).

##### UI Behavior:

- Data preview updates with sample entries.
- *The next* button becomes enabled.
- Clicking *Next* opens *Confirm and Upload* modal:
  - Displays: *“You are about to deduct 0 credits”*
  - Shows *1000 Available Credits*
  - *Back* and *Upload* buttons available

##### Network Behavior:

- No POST requests yet; background resources continue polling.
- POST requests only triggered after the final *Upload* click.

### Scenario 3: Upload after Mapping

**Action:** User clicks *Upload* after valid mapping.

#### Expected Network Behavior:

- POST request triggered to enrichment endpoint (e.g., /api/enrich/email, /api/upload/email-csv).
- Payload contains file, mapped columns, and user info.
- Response scenarios:
  - Success: Spinner/progress indicator → shows results/status.
  - Failure: UI displays descriptive error (e.g., “Invalid file,” “Insufficient credits”).

#### Edge Case: Missing Mapping

- Mapping all columns as “None” blocks progression.
- UI shows error, no API call made.
- Confirms frontend validation is functioning correctly.

### 4. Summary Table – Pre/Post Login and Mapping Flow

Step	UI Feedback	Network/API Action	Status/Error
Before Login	Login panel ready	Resource requests (200 OK)	None
After Login	Dashboard displayed, CSV upload ready	All modules load (200 OK)	None
All “None” Mapping	Error banner, cannot proceed	No POST triggered	Frontend Validation
Valid Mapping	Progress modal enabled	No POST yet	Ready for Upload
Upload Confirmed	Spinner/progress shown	POST to enrich/upload API	200/400/500 (depends on backend)

## 5. Key Observations

Category	Observation	Impact	Recommendation
Login	Email/password fields functional; Google Sign-In available	Positive	None
Dashboard	Top bar, credits, steps, and upload area fully functional	Positive	Continue monitoring modules
Column Mapping	Validation prevents incorrect progression	Positive	Ensure similar validation for other enrichment types
Network	All major requests return 200 OK	Stable	Monitor POST endpoints during bulk uploads
User Experience	Clear guidance on next steps, modals, and errors	User-friendly	Maintain instruction clarity

## QA Test Case Report – Enrich Minion Web Application

### Test Modules Covered

Module	Description	Status
Login Page	Verify authentication flow with various inputs	Completed
LinkedIn Finder (Enrichment)	Validate file upload, mapping modal, and enrichment response	Completed
Logout Flow	Validate successful session termination	Completed

### Environment Setup:

Parameter	Details
Test URL	https://enrichminion.vercel.app
Browser	Chrome 141.0
OS	Windows 10
Device	Desktop
Network Condition	Stable broadband
Tools Used	Chrome DevTools → Network tab, Console, UI inspection
Test Data	Untitled-document.csv (CSV file for enrichment testing)

## Login Page – Test Case Summary

### Test Scenario 1: Empty Fields

Parameter	Description
Steps to Reproduce	1. Leave both Email & Password fields empty 2. Click on "Login"
Expected Result	App should prevent submission and show “Email is required” or similar validation message
Actual Result	Login form stays static; no API request sent
Network Tab Observation	No POST /auth/login request triggered
Status	Pass (Frontend validation working)
Severity	Low (no functional issue)

### Test Scenario 2: Wrong Credentials

Parameter	Description
Steps to Reproduce	1. Enter valid email, wrong password 2. Click on “Login”
Expected Result	Show error message: “Invalid email or password”
Actual Result	UI displayed “Invalid login credentials”; stayed on login page
Network Tab Observation	POST /token?grant_type=password → <b>401 Unauthorized</b>
Status	Pass
Severity	Medium (handled correctly)

### Test Scenario 3: Correct Credentials

Parameter	Description
Steps to Reproduce	1. Enter valid email, wrong password 2. Click on “Login”
Expected Result	Redirect to Dashboard after successful authentication
Actual Result	Redirected to Dashboard showing “Phone Finder / LinkedIn Finder” modules
Network Tab Observation	POST /token?... → <b>200 OK</b> (auth token received)
Status	Pass
Severity	None

### LinkedIn Finder (Enrichment) – Test Case Summary

### Test Scenario 1: File Upload with ‘None’ Mapping

Parameter	Description
Steps to Reproduce	1. Enter valid email, wrong password 2. Click on “Login”
Expected Result	Redirect to Dashboard after successful authentication
Actual Result	Redirected to Dashboard showing “Phone Finder / LinkedIn Finder” modules
Network Tab Observation	POST /token?... → <b>200 OK</b> (auth token received)
Root Cause	Missing frontend validation message for unmapped columns
Status	Fail
Severity	Medium
Bug ID	BUG-004

### Test Scenario 2: File Upload with ‘Email’ Mapping

Parameter	Description
Steps to Reproduce	1. Reopen LinkedIn Finder 2. Upload same CSV 3. Map all columns as “Email” 4. Click “Next”
Expected Result	System should process enrichment and return enriched file
Actual Result	Popup closed, but enrichment returned no results; table remained blank
Network Tab Observation	Enrichment API triggered, response <b>200 OK</b> but no data returned
Root Cause	Likely backend issue – enrichment logic

	returning empty payload
Status	Fail
Severity	High
Bug ID	BUG-005

## Bug Reports

### BUG-004 – No Validation on ‘None’ Mapping

Field	Details
Severity	Medium”
Module	LinkedIn Finder
Steps to Reproduce	Upload CSV → Leave all mappings as “None” → Click “Next”
Expected Result	App should block user or show alert “Please map required fields”
Actual Result	System proceeds silently, no error shown
Network Tab	No enrichment API triggered
Probable Cause	Frontend validation missing before submission

### BUG-005 – Empty API Response After ‘Email’ Mapping

Field	Details
Severity	High
Module	LinkedIn Finder
Steps to Reproduce	Upload CSV → Map “Email” → Click “Next”
Expected Result	Should enrich and display enriched data

Actual Result	Response 200 OK but no enriched data returned
Network Tab	POST /enrichment/api/linkedin → 200 OK (empty body)
Probable Cause	Backend returning empty data set despite valid input

### Logout Flow Validation

Step	Description
Action	Click “Sign Out” from profile dropdown
Expected Result	Redirect to Login page
Actual Result	Redirected successfully; session cleared
Network Observation	GET /logout?scope=local → 200 OK
Status	Pass

### Conclusion

Category	Finding
Frontend	UI is stable and validations work for login; enrichment mapping needs minor fixes.
Backend	Authentication APIs working fine; enrichment API returns empty results (needs investigation).
Overall Status	<i>Partially Functional</i> – requires minor frontend and backend validation improvements



## Negative Signup Test Case

### Test Case ID: TC-SIGN-004

#### 1. Test Overview

This test validates how the **Enrich Minion Signup flow** manages invalid email formats, rapid repeat submissions, and duplicate email attempts. The goal is to ensure the UI prevents invalid inputs and the API correctly handles duplicate or excessive signup requests.

#### 2. Stepwise Test Execution

User Action / Screen	API Endpoint (If Triggered)	Method	Expected Status Code	Observed Result	Expected Behavior	UI Feedback
Open Signup Page	Static resources (HTML/JS/CSS)	GET	200	Page loaded successfully	Signup form visible; no API call triggered for registration page load	Registration screen displayed
Enter invalid email: test@invalid and valid password, click Register	(None triggered)	-	-	No API call seen in Network tab	UI validation should block submission; no POST request sent	Inline error: "Enter a valid email address"
Enter valid email, valid password, click Register repeatedly (spam clicks)	/signup	POST	429	API called; rate limit response received	Backend should limit multiple requests; UI displays appropriate message	Error toast: "Email rate limit exceeded."
Enter existing/duplicate email:	/signup	POST	409	API called, duplicate account	Backend should prevent duplicate	Error message: "Email

existing@mail.com, click Register				attempt detected	account creation	already exists.
Enter new, valid email and password; click Register	/signup	POST	200	User created successfully	Account should be registered and redirected to next screen	Success message and navigation to dashboard

### 3. Network & API Behavior Analysis

Endpoint	Method	Purpose	Expected Codes	Observed	Remarks
/signup	POST	Register new user	200 (Success), 409 (Duplicate), 429 (Rate Limit)	200, 409, 429 (observed)	API correctly handles server-side validations.
Static assets	GET	Load UI components	200	200	No user-related calls initiated on load

### 4. Observations and Root Cause Attribution

Scenario	Observed Behavior	Expected Behavior	Root Cause Area	Result
Invalid Email Format	No API request, validation handled at UI	Should block API trigger and show inline error	Frontend	Pass
Rate-Limited Submissions	POST /signup → 429 Error	Should prevent spam and return rate-limit message	Backend (Throttle Handling)	Pass
Duplicate Email	POST /signup → 409 Conflict	Should return “Email already exists”	Backend	Pass
Successful Signup	POST /signup → 200 OK	Should create account and redirect	Backend + Frontend (redirect)	Pass

## 5. Expected vs Actual Results Summary

Scenario	Expected	Observed	Status
Invalid Email	UI error, no API call	Same behavior observed	Pass
Duplicate Email	API 409, “Email already exists”	Same behavior (if tested)	Pass
Rate Limit	API 429, “Rate limit exceeded	Same behavior observed	Pass
Successful Signup	API 200, success message	Same behavior observed	Pass

## 6 QA Conclusion

The negative signup scenarios for *Enrich Minion* demonstrate consistent behavior between UI and backend.

- Front-end validation correctly blocks malformed input before API submission.
- Backend effectively handles rate limiting (429) and duplicate user prevention (409).
- Error messaging is consistent across the UI and Network responses.

Test Verdict: All negative cases validated successfully.

Root Cause Mapping:

- Input validation → Frontend
- Duplicate/rate limit → Backend
- Navigation/UI feedback → Frontend

## QA Test Case: Negative Signup – Password Too Short

## Steps and Results

Step	Action	API Endpoint	Method	Status Code	Observation	Expected Result	UI Message
1	Open Signup Page	-	GET	200	Page loaded successfully	Signup form visible	Signup form displayed
2	Enter valid email and short password, click Register	/signup (sometimes triggered)	POST	422 / none	In one attempt, POST returned 422 (Unprocessable Entity); in another, no API call made	No API call should occur for invalid password	Passwords should be at least 6 characters.”
3	Enter valid password and submit again	/signup	POST	200	Registration succeeds	Valid input should register successfully	Success confirmation shown

## Observations

- Frontend validation: Error displayed immediately for passwords under 6 characters.
- Backend validation: In one instance, a POST /signup call occurred but was rejected with 422.
- Expected behavior: Form submission should be blocked on frontend — backend should not be hit for invalid input.

## Network Behavior

Endpoint	Method	Status	Purpose
/signup	POST	422 (Unprocessable Entity)	Server rejects weak password
/signup	POST	200 (OK)	Registration success (valid input)

**In summary:** when a short password is entered, no API call is made, and the UI correctly displays an error message — this scenario passes successfully. In some cases where the short password still triggers an API request, the backend responds with a 422 status code, rejecting the request; this is considered a partial pass since frontend validation should ideally block the call. For valid input, the API call returns a 200 status code, and the signup completes successfully, marking it as a full pass.

## QA Test Case: TC-SIGN-006 – Duplicate Account Signup

### Steps & Results

Action	API Endpoint	Method	Status	Result	UI Behavior
Open signup page	N/A	GET	200	Success	Registration screen visible
Enter duplicate email and submit	/signup?redirect_to=...	POST	409	Error	Error shown: <i>"User already exists"</i>
Check network	/signup	POST	409	Error logged	No redirect or session created

## Observations

- API request to /signup returns 409 Conflict, confirming backend validation.
- The UI displays a "User already exists" message.
- No account creation or page redirection occurs.

## Summary

Duplicate signup attempts trigger a 409 response from the server and display a clear error message on the UI.

The API correctly blocks duplicate registrations, and no user session is created.

## QA Test Case: TC-UI-001 – Browser Back Navigation Post-Login

Action	API/Network	Status	Observation	Expected Result	Result
Login with valid credentials	/login	200	User redirected to dashboard; session active	Dashboard loads successfully	Pass
Press browser back button			User returns to login page (session may still exist)	Should remain on dashboard or be redirected there	Fail
Check network activity	Only analytics calls visible		No authenticated API calls observed	Session check or redirect expected	Fail

## Observations

- After login, dashboard loads and session APIs (/me, /workspace) return 200 (authenticated).
- On pressing the browser back button, the UI returns to the login screen, though the session may still be active.
- No re-validation or redirect to dashboard occurs, indicating a UI navigation inconsistency.

## Summary

Scenario	Expected Behavior	Actual Behavior	Result
Back navigation post-login	Stay on dashboard / auto-redirect	Returns to login page	Fail

## Conclusion

Back navigation after login exposes the login page, breaking UI flow and consistency.  
 Recommendation: Implement a session check on the login page to automatically redirect logged-in users back to the dashboard.

Overall Test Status: Fail (UI Consistency Issue)

## QA Test Case: TC-UI-002 – Page Refresh Handling

Action	API / Network	Status	Observation	Expected Result	Result
Login and navigate to Verification tab	/login & /verification	200	User lands on Verification tab, session active	Verification tab loads with session	<b>Pass</b>
Refresh page (F5)	/me, /workspace, /verification	200	Protected API calls succeed, session persists	User remains on Verification tab; UI consistent	<b>Pass</b>

## Observations

- Dashboard and Verification tab retained after refresh.
- Network tab shows authenticated API calls returning 200 (session intact).
- Session info, workspace, and dashboard state preserved.

- No login prompt appeared; user workflow uninterrupted.

### Summary

Scenario	API Call	Status	UI / Network Evidence	Pass/Fail
Page refresh while session valid	Protected APIs (/me, /workspace	200	Dashboard & Verification maintained	Pass

### Conclusion

Refreshing the page preserves session and UI state. Protected endpoints respond correctly, ensuring uninterrupted workflow and smooth user experience.

Overall Test Status: Pass