

Test Strategy Document

Project: EchoGPT (<https://echogpt.live/>)

Feature Under Test: User Registration & Core AI Features

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1.0 Introduction

This document outlines the test strategy for the quality assessment of the EchoGPT platform, an AI-driven productivity tool. The primary focus is on evaluating the user sign-up feature and the core AI functionalities, including Image Generation and AI Job Analysis, as mandated by the assignment brief. This strategy defines the scope, objectives, and methodologies to ensure a comprehensive evaluation of the application's functionality, usability, and security.

2.0 Scope

2.1 In-Scope

- **Functional Testing:** All sign-up methods (Email OTP, Google, Twitter), login, and core AI features (Image Generator, AI Job Analysis tools, AI Tools Store).
- **User Interface (UI) & Usability Testing:** Navigation, link functionality, form interactions, and keyboard accessibility.
- **Security Testing:** Validation of authentication mechanisms and input validation.
- **Compatibility Testing:** Spot-checking on secondary browsers.
- **Error Handling:** System response to invalid inputs and edge cases.

2.2 Out-of-Scope

- Performance/Load Testing and Stress Testing.
- Full-scale Accessibility (WCAG) Compliance Audit.
- Mobile Device Testing.
- Backend API or Database Testing.
- Testing of the separate platform site (platform.echogpt.live).

3.0 Test Objectives

The primary objectives of this test cycle are to:

- Verify the functionality and reliability of all user registration and authentication flows.
- Validate the core performance and accuracy of the AI-powered features (Image Generation, Job Analysis).
- Identify any security vulnerabilities within the tested features.
- Assess the user experience for intuitiveness and ease of use.
- Provide a detailed quality assessment and actionable recommendations.

4.0 Testing Approach & Methodology

A multi-faceted testing approach will be employed to ensure comprehensive coverage within the assignment constraints:

- **Functional Testing:** Black-box testing to verify all features against specified requirements.
- **Negative Testing:** Deliberate input of invalid data to test error handling and system robustness.
- **UI & Usability Testing:** Evaluation of the user interface for intuitiveness, consistency, and accessibility.
- **Security Testing:** Basic validation of authentication and authorization controls.
- **Ad-hoc & Exploratory Testing:** Unscripted testing to uncover unforeseen issues beyond test cases.
- **Compatibility Testing:** Verification of core functionality on the Brave browser.

5.0 Test Environment

- **Primary Browser:** Google Chrome (Latest Version) on Windows 11
- **Secondary Browser:** Brave Browser (for compatibility spot-checking)
- **Test URL:** <https://echogpt.live/> (Production Environment)
- **Test Data:** Use of personal and disposable email accounts.

6.0 Entry and Exit Criteria

6.1 Test Cycle Entry Criteria

- The live application is accessible and stable.
- Test cases have been designed and reviewed.

6.2 Test Cycle Exit Criteria

- All designed test cases have been executed.
- All discovered Critical and High-severity defects have been documented and reported.
- A Test Execution Report has been completed.

7.0 Risk Assessment

Risk ID	Description	Impact	Probability	Severity	Mitigation Strategy
RISK-01	OTP email service is non-functional	High	High	Critical	Execute test cases early. Document as a blocker.
RISK-02	Core AI features (Image Gen, Job Analysis) are non-functional	High	High	Critical	Prioritize testing these features after sign-up.
RISK-03	Third-party authentication fails	High	Medium	High	Test all OAuth options.
RISK-04	Input validation is weak or missing	High	High	Critical	Design extensive negative test cases.

8.0 Deliverables

The following artifacts will be produced upon completion of this test cycle:

- 1. **Test Strategy Document** (This Document)
- 2. **Test Case Suite:** A detailed set of test cases.
- 3. **Test Execution Report:** Summary of test results and metrics.
- 4. **Defect Reports:** Detailed bug reports for all discovered issues.
- 5. **Executive Summary:** A high-level overview for management.

Document Approval:

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