**Test Strategy Document**

**Project:** EchoGPT (<https://echogpt.live/>)  
**Feature Under Test:** User Registration & Core AI Features  
**Version:** 1.0  
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**Status:** Final

**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**

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| --- | --- | --- | --- | --- | --- |
| **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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