

## RISK MANAGEMENT LOG

| Project Name:         |                | Intellegent API Application                                                         |                           |          |                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                 |                                                  |  |
|-----------------------|----------------|-------------------------------------------------------------------------------------|---------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|--|
| National Center:      |                | \                                                                                   |                           |          |                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                 |                                                  |  |
| Project Manager Name: |                | nate lee                                                                            |                           |          |                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                 |                                                  |  |
| Project Description:  |                | create an app that receives from multiple api for intellegent output for the client |                           |          |                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                 |                                                  |  |
| ID                    | Current Status | Risk Impact                                                                         | Probability of Occurrence | Risk Map | Risk Description                                                                                                                                                                                                                                                                                                                                                                     | Project Impact                                                                                                                                                                                  | Risk Area                                        |  |
| 1                     | Open           | High                                                                                | Low                       | Yellow   | EXAMPLE: Current project skill set may not be adequate to complete all project work. The current development team has been working in a Windows 2k environment, and the current requirements are for a LINUX environment. The project schedule would require 1500 development hours of a skilled LINUX operator, and approximately 1900 to 2200 if we retrain our current resources. | EXAMPLE: If required skills are not identified or obtained, project schedule may slip and possibly restrict the accomplishment of project goals.                                                | Project Resources<br>Budget<br>Schedule          |  |
| 2                     | Open           | High                                                                                | Medium                    | Red      | Spotify or movie APIs change access policies or authentication methods.                                                                                                                                                                                                                                                                                                              | If the access to certain APIs changes, the entire system could face a breakdown.                                                                                                                | API access keys, Database system, backend devs   |  |
| 3                     | Open           | Low                                                                                 | Low                       | Green    | API rate limits restrict data retrieval.                                                                                                                                                                                                                                                                                                                                             | API rate limiting could negativley effect response time of the actual application.                                                                                                              | testing and debug periods, patience, buffers     |  |
| 4                     | Open           | Medium                                                                              | Medium                    | Yellow   | Inaccurate mood analysis due to flawed algorithm or data.                                                                                                                                                                                                                                                                                                                            | An innacurate mood analysis would lower app reliability, but no real threat to the application itself.                                                                                          | backend devs, data analysts, dev timeline        |  |
| 5                     | Open           | Medium                                                                              | Medium                    | Yellow   | Integration issues between multiple APIs.                                                                                                                                                                                                                                                                                                                                            | integration conflicts between API could prove to be a devastating issue, but its likely theres a simple workaround                                                                              | backend devs, API documentation, data references |  |
| 6                     | Open           | Medium                                                                              | Low                       | Green    | Security vulnerability in handling API tokens or user data.                                                                                                                                                                                                                                                                                                                          | Security will most likely be an issue on the end of Spotify, since the login is going to be outsourced. Whatever happens to them happens to us, but its not particularly going to be our fault. | backend devs, API documentation                  |  |
| 7                     | Open           | Medium                                                                              | High                      |          | Poor network performance or connectivity issues.                                                                                                                                                                                                                                                                                                                                     | simular to rate limiting, connectivity issues will undercut the apps preformance, but have no real effect over the final result.                                                                | data anlysts, dev workstations                   |  |
| 8                     | Open           | Medium                                                                              | Medium                    | Yellow   | Licensing or copyright issues using third-party APIs.                                                                                                                                                                                                                                                                                                                                | We can probalby BS a little bit and pirate such and such, but I'd prefer to avoid copyright claims.                                                                                             | data anlysts, schedule, database system          |  |
| 9                     |                |                                                                                     |                           |          |                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                 |                                                  |  |
| 10                    |                |                                                                                     |                           |          |                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                 |                                                  |  |
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| Project Name:                                                                                                                 | Intellegent API Application                                                                                                        |                        |                                                                                                                                      |                                                                                                                                         |
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| National Center:                                                                                                              | \                                                                                                                                  |                        |                                                                                                                                      |                                                                                                                                         |
| Project Manager Name:                                                                                                         | nate lee                                                                                                                           |                        |                                                                                                                                      |                                                                                                                                         |
| Project Description:                                                                                                          | create an app that recieves from multiple api for intellegent output for the client                                                |                        |                                                                                                                                      |                                                                                                                                         |
| Symptoms                                                                                                                      | Triggers                                                                                                                           | Risk Response Strategy | Response Strategy                                                                                                                    | Contingency Plan                                                                                                                        |
| EXAMPLE: Schedule approaches the required start date with no identification of required skill sets.                           | EXAMPLE: Four weeks prior to scheduled start date if no resource is identified with required skill set implement contingency plan. | Mitigation             | EXAMPLE: Find internal resource that meets required skill set or train existing resources on LINUX.                                  | EXAMPLE: Find resource that meets required skill set through external hiring sources.                                                   |
| because you have to set up an account, emails will be sent out to users                                                       | • API providers announce changes in terms of service or authentication methods.                                                    | Mitigation             | monitor API provider updates and update OAuth flow quickly. Use environment variables and modular auth code to make patches fast.    | Switch to backup API provider if available or temporarily disable affected features while implementing new authentication requirements. |
| 429 error too many requests popup                                                                                             | Rapid user testing periods or multiple API calls in short bursts.                                                                  | Mitigation             | implement caching, request batching, or local storage to reduce API hits. Optimize calls so only necessary data is fetched.          | Use a queueing system, stagger requests, or use mock data sets temporarily while waiting for limit resets.                              |
| results will appear bizarre and ununiform, or juxtaposed                                                                      | Sudden divergences in test results after updates.                                                                                  | Mitigation             | Implement automatic token refresh logic using refresh tokens.                                                                        | Disable ML recommendations temporarily; switch to rule-based or genre-based mood matching until model improves                          |
| HTTP errors, timeouts, malformed data                                                                                         | API responses start returning unexpected field names or missing data                                                               | Mitigation             | Cache recent data (recently played tracks, profiles) to reduce unnecessary API calls.                                                | Temporarily switch to cached data for user music history until rate limit resets.                                                       |
| Users suddenly getting logged out frequently, OAuth tokens expiring faster than normal                                        | OAuth tokens appear in logs or console output                                                                                      | Mitigation             | Cache successful movie lookups for redundancy. Implement robust error-handling with retry attempts.                                  | Log failure and continue running the app rather than stopping recommendation flow.                                                      |
| API requests frequently timeout, Users report the web app freezing when trying to login or load results                       | Frequent timeouts when calling Spotify, movie APIs, or Flask backend                                                               | Mitigation             | Add logging to capture traceback errors and restart causes, Keep a local fallback mode for UI demo functionality if backend is down. | Switch the frontend to offline/cached mode to let the user still see previous recommendations.                                          |
| API returns partial data because certain fields are blocked, Some search results stop appearing even though they used to work | API provider changes Terms of Service                                                                                              | Transfer               | Immediately rotate compromised keys in all affected APIs                                                                             | Generate and deploy a new key to the server or .env file.                                                                               |
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