Copyscript AI Milestone Analysis

Overview

This document provides a detailed analysis of the milestones in the Copyscript AI Plan, including complexity assessment, estimated duration, and implementation considerations.

Current Issues (Fixes Needed)

1. CSV Parsing Issues

- **Description**: The script parses the first line of the CSV file incorrectly, with issues in handling subheadings (uppercase/lowercase).
- **Complexity**: Low to Medium
- **Estimated Duration**: 1 day
- **Implementation Notes**:
  - Improve case-sensitivity handling
  - Add validation for CSV structure
  - Implement proper error messages
  - Create standardized CSV template

2. Summarize and Keynotes Enhancement

- **Description**: Improve the Summarize and Keynotes sections by using a large context window LLM to process the entire article.
- **Complexity**: Medium
- **Estimated Duration**: 1 day
- **Implementation Notes**:
  - Implement large context window processing
  - Add chunking strategy for very large articles
  - Refine prompts for summary and key takeaways
  - Add configuration for placement in the article

3. Error Handling and Formatting

- **Description**: Improve error handling and formatting throughout the codebase.
- **Complexity**: Low to Medium

- **Estimated Duration**: 1 day
- **Implementation Notes**:
    - Standardize error handling
    - Improve logging
    - Enhance output formatting

4. RAG Implementation Issues

- **Description**: There are issues with the current RAG (Retrieval-Augmented Generation) implementation.
- **Complexity**: High
- **Implementation Notes**:
    - The current RAG implementation has problems that need to be addressed
    - **Important**: I do not have experience with RAG implementation and cannot fix these issues. This would require someone with specific expertise in retrieval-augmented generation systems.

Milestone Analysis

> **Note**: Milestone 1 has already been completed and is not included in the implementation plan.

Milestone 2: Implement RAG with Web Search

3. Implement RAG with Web Search

- **Description**: Integrate real-time web search to supplement content generation. Develop a retrieval system that fetches relevant information and merges it with generated output for better accuracy.
- **Complexity**: High
- **Estimated Duration**: 4-5 days
- **Implementation Notes**:
    - Implement search engine API integration (DuckDuckGo, Brave, or Serper)
    - Develop web content extraction and cleaning
    - Implement vector database for storage (ChromaDB, FAISS)
    - Create embedding generation and retrieval system
    - Integrate with article generation workflow

> **Important**: I do not have experience with RAG implementation and cannot work on this milestone. This would require someone with specific expertise in retrieval-augmented generation systems.

Milestone 3: Multi-Image Wrapper for CC0 Sources

- **Description**: Create a flexible wrapper to source images from multiple CC0 repositories. Allow users to dynamically select their preferred image source, ensuring better visual content integration.
- **Complexity**: Medium to High
- **Estimated Duration**: 3-4 days
- **Implementation Notes**:
  - Implement API integrations for Unsplash, Pexels, and Pixabay
  - Create fallback mechanism for image retrieval
  - Implement flexible image positioning options
  - Add error handling and retry mechanism
  - Integrate with existing image handling system

> **Important**: I do not have sufficient experience with image processing and API integrations for image sources. I would prefer not to work on image-related milestones.

Milestone 4: Image Recognition & Metadata Injection For WordPress

- **Description**: Enhance images by recognizing content and automatically adding relevant attributes. Improve metadata handling for better SEO and structured image tagging.
- **Complexity**: High
- **Estimated Duration**: 4-5 days
- **Implementation Notes**:
  - Implement image analysis using BLIP model
  - Create metadata generation using FLAN-T5 LLM
  - Develop filename management system
  - Implement WordPress API integration
  - Add quality control measures for metadata validation

> **Important**: I do not have experience with image recognition models or WordPress API integration for image metadata. I would prefer not to work on this milestone.

Milestone 5: Multi-LLM Support & Routing

- **Description**: Enable support for multiple LLMs (LLAMA, Deepseek, Gemini, Claude, OpenAI). Implement a routing system to select the best model dynamically and handle fallbacks efficiently.
- **Complexity**: High
- **Estimated Duration**: 4-5 days
- **Implementation Notes**:
  - Implement API integrations for multiple LLM providers
  - Create routing system for model selection
  - Implement fallback mechanisms
  - Add retry logic for API calls
  - Standardize model usage across the codebase

> **Note**: OpenRouter is already implemented in the codebase, which provides access to multiple LLM models. Clarification is needed from the client about what additional multi-LLM support is required beyond the current implementation.

Summary of Estimated Durations

Current Issues (Fixes)

- CSV Parsing Issues: 1 day
- Summarize and Keynotes Enhancement: 1 day
- Error Handling and Formatting: 1 day
- **Total for Fixes**: 1-2 days
- **Price**: 25 Euros

Milestones

- Milestone 2 (Implement RAG with Web Search): Not undertaking (lack of expertise)
- Milestone 3 (Multi-Image Wrapper): Not undertaking (lack of expertise)
- Milestone 4 (Image Recognition & Metadata): Not undertaking (lack of expertise)
- Milestone 5 (Multi-LLM Support): Requires clarification from client

- **Total for Milestones**: Depends on client clarification

Implementation Strategy

Phase 1: Fix Current Issues (1-2 days)

- Implement CSV parsing improvements
- Enhance Summarize and Keynotes functionality
- Standardize error handling and formatting

Conclusion

The current issues (fixes) are relatively straightforward and can be completed in 1-2 days. These include improving CSV parsing, enhancing the Summarize and Keynotes functionality, and standardizing error handling.

I do not have the expertise to work on RAG implementation (Milestone 2) or image-related milestones (Milestone 3 and 4), so these would need to be assigned to someone with relevant experience.

For Milestone 5 (Multi-LLM Support), clarification is needed from the client since OpenRouter is already implemented in the codebase, which provides access to multiple LLM models.