1. Introduction

As a researcher engaged in academic and scientific work, I require a web-based system that supports efficient handling of scholarly articles throughout my research process. The system should help me upload, store, summarize, annotate, and reference articles in a centralized and organized way, saving me time and reducing manual effort. The system should prioritize usability, accuracy, and support for established academic workflows.

2. User Goals and Expectations

The core objectives of the system from my perspective as a researcher are:

- Streamline the process of collecting and organizing scientific articles.
- Enable fast comprehension of articles through automated summaries.
- Allow personalized notes and annotations for reference and collaboration.
- Provide seamless citation generation in commonly used academic formats.
- Maintain a searchable library of references I've used or plan to use.
- Offer a clean, intuitive, and responsive user interface accessible from various devices.

3. Functional Requirements (User-Focused)

3.1 Article Upload and Storage

- I want to upload articles in PDF or text format.
- The system should allow batch uploads for multiple files.
- I want the system to store and categorize articles for easy access.

3.2 Metadata Entry and Editing

- I should be able to manually enter metadata fields including:
 - o Title
 - Authors
 - Journal/Conference name
 - Publication year
 - DOI (if available)
 - Abstract
 - Keywords
- I want to be able to edit this metadata at any time after upload.

3.3 Automatic Article Summarization

- I want the system to automatically generate a summary of each uploaded article.
- Summaries should be concise but informative enough to grasp the article's purpose and findings.
- I should have the option to regenerate or manually edit summaries.

3.4 Notes and Annotations

- I want to add personal notes to each article.
- These notes should be time-stamped and optionally linked to specific parts (e.g., page or section).
- I should be able to edit and delete notes as needed.

3.5 Citation and Reference Management

- I need to generate citations and references for each article in multiple formats (APA, MLA, Chicago, etc.).
- I want to copy or export these references as needed.
- The system should support in-text citation generation where applicable.

3.6 Reference Library

- I want to save the references I use when writing my own research articles.
- These references should be searchable and grouped by project, topic, or article.
- I should be able to import/export references in standard formats (e.g., BibTeX, RIS).

4. Usability and Interface Requirements

- The interface should be minimal, clean, and responsive on desktop, tablet, and mobile.
- Navigation should be intuitive with minimal learning curve.
- I should be able to search and filter articles and references easily (e.g., by keyword, author, year).
- The system should support dark mode or customizable viewing settings.

5. Non-Functional Considerations

- **Data Security**: Uploaded files, notes, and metadata should be stored securely and accessible only to me unless I choose to share.
- **Reliability**: The system should not lose data during uploads or edits.
- **Performance**: Summarization and citation generation should complete quickly, ideally within a few seconds.
- **Scalability**: The system should accommodate a growing personal library of hundreds or thousands of articles without performance issues.

6. Future Considerations (Optional but Desirable)

- Integration with reference managers like Zotero, Mendeley, or EndNote.
- Collaborative features for sharing articles and notes with colleagues.
- Version control or change history for notes and summaries.
- Tagging system for better organization.

7. Conclusion

This system should serve as a digital workspace for managing the literature I rely on in my research. It should reduce repetitive tasks, support academic writing needs, and help maintain an organized knowledge base. I look forward to a user-friendly and robust tool that aligns with real research workflows.