





Transforming PDF Management with AI and Cloud Solutions

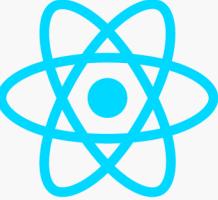
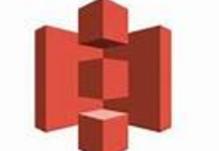
By Team- Loosers

PROPOSED SOLUTION

- **Centralized Storage (AWS & Vector DB):** Secure, scalable storage and indexing of PDFs for easy access.
- **AI-Powered Search & Summarization (BERT/AI APIs):** Intelligent search and quick content summarization.
- **Efficient Indexing & Querying:** Fast document retrieval and organized data structure.
- **Preview & Annotation:** View and annotate PDFs without downloading.
- **Scalable & Secure Architecture:** Handles large document volumes with robust security.
- **Cloud-Based:** Utilizes AWS Cloud for scalability and reliability.

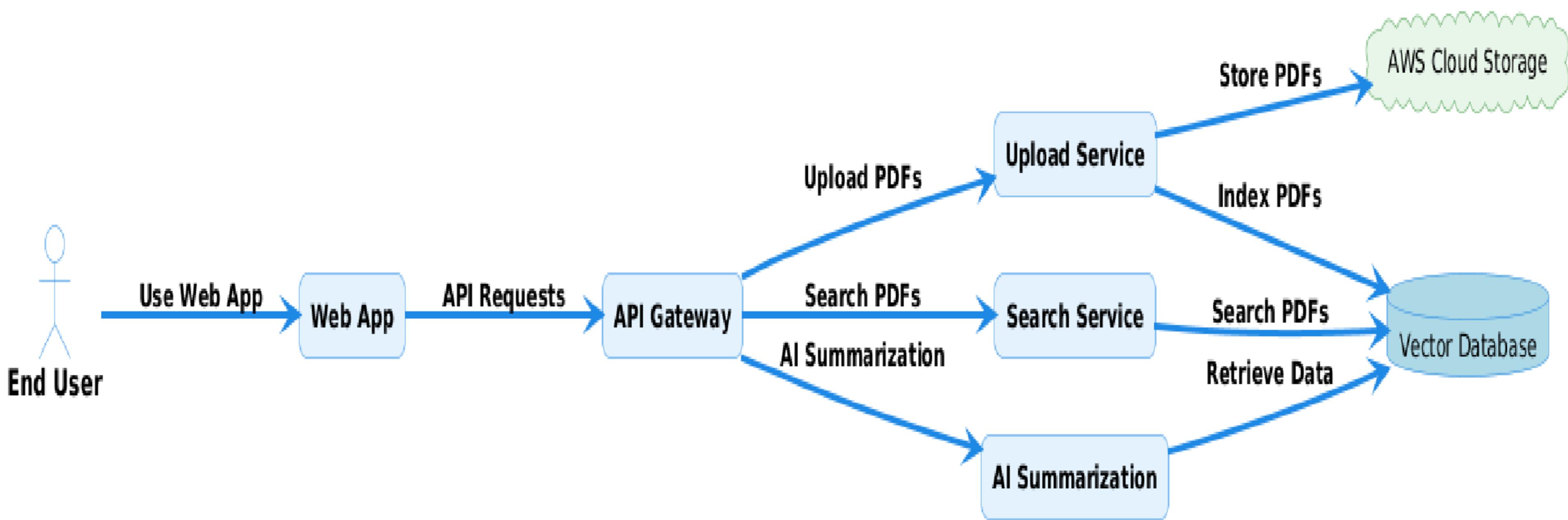


TECHNICAL APPROACH

Frontend	Backend	Vector Database	Cloud Storage	AI ML	Authentication	Deployment	Security and monitoring
							
							
							
							

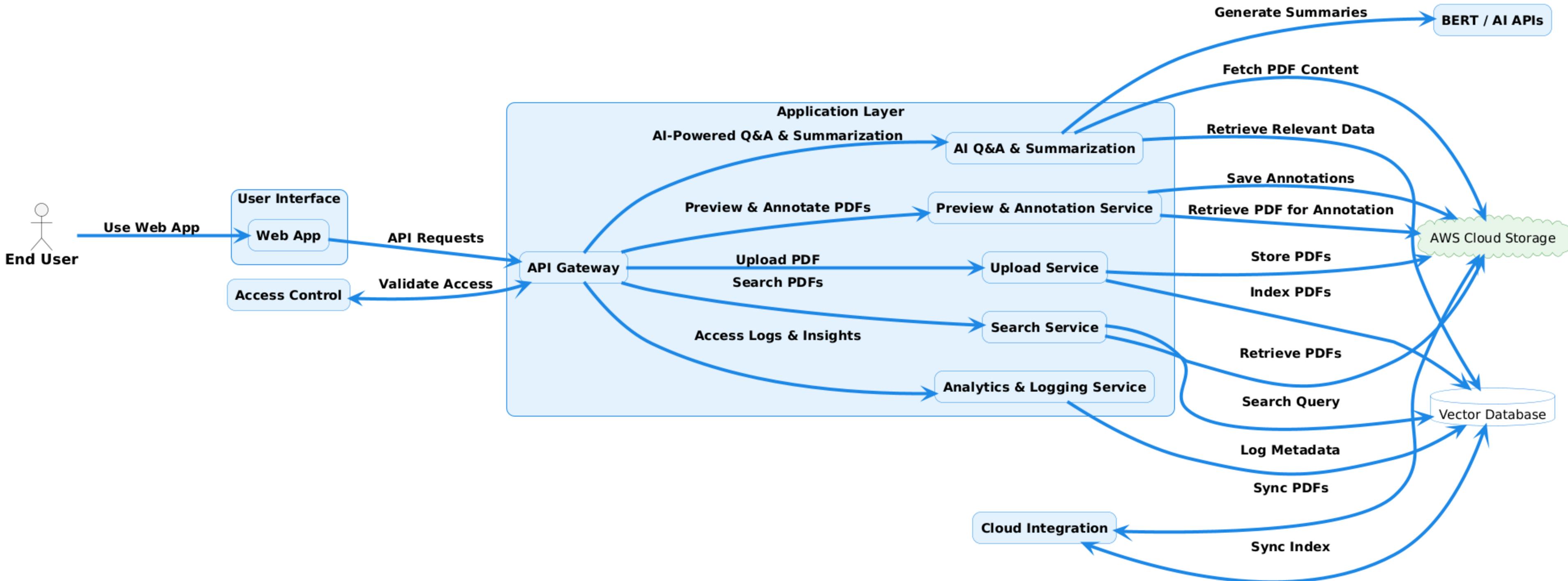


Brief Flow Diagram - Smart PDF Search & Management System





Smart PDF Search & Management System Architecture



WORKFLOW OF THE ARCHITECTURE

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1. **User Uploads:** User uploads a PDF document via the web app.
2. **API Gateway:** Validates the request and routes it to the Upload Service.
 - **PDF Processing:** The Upload Service stores the PDF in AWS Cloud Storage.
 - The Search Service indexes the PDF for efficient searching.
 - AI services (in the Application Layer) extract key information, answer questions, and generate summaries.
3. **User Search:** User performs a search query.
4. **Search Service:** Retrieves relevant PDFs based on the query.
5. **User Interface:** Presents search results, summaries, and annotations to the user.

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DASHBOARD DESIGN PROTOTYPE

Smart PDF Management

Home

AI Summarise

LogOut

Past History

Document1.pdf

View

Uploaded on: 2025-01-10

ProjectReport.pdf

View

Uploaded on: 2025-01-12

Resume.pdf

View

Uploaded on: 2025-01-14

Resume.pdf

View

Drag and drop your PDF here

Search PDFs...

Search

Chatbot

Hello! How can I help you today?

what is partial differentiation

Thank you for your interest
We're working hard to bring these feature to you soon

Type a message...

Send

Unit- I : Partial Differentiation

- Introduction
- How to find partial derivatives?
- Variables to be treated as constant
- Euler's Theorem for Homogeneous functions
- Partial derivatives of composite functions
- Total derivative

18-01-2022 Prof. Avinash Raut, Calculus Course Coordinator, VIT-VI

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Basic Electronics Engineering (ET10203B)(FY A&ES SEM-II)

Unit- III: Field-Effect Transistor (FET) and Power Devices

Dr. Pravin G. Gawande pravin.gawande@viit.ac.in

Department of Electronics and Telecommunication Engineering

BRACT'S, Vishwakarma Institute of Information Technology, Pune

(An Autonomous Institute affiliated to Savitribai Phule Pune University)
(NBA and NAAC accredited, ISO 9001:2015 certified)

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Unit II : Applications of Partial Derivatives

Content:

1. Maxima and Minima of function of two variables
2. Lagranges Method of undetermined multiplier
3. Errors & Approximations
4. Jacobian

18-01-2022 Prof. Avinash Raut, VIT-PUNE

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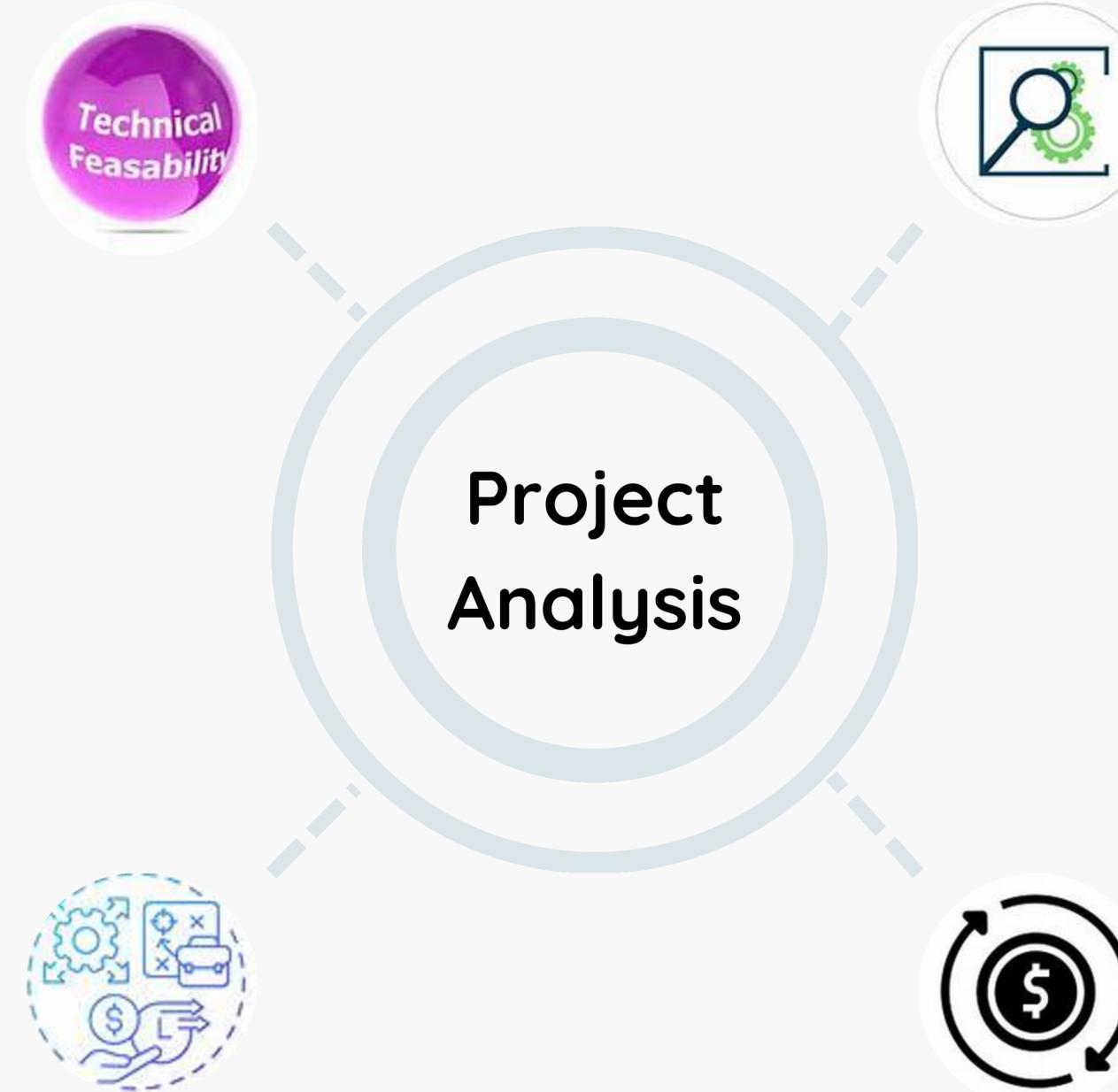
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FEASIBILITY AND VIABILITY

Technical Feasibility: Uses AI-powered search & summarization (BERT, AI APIs), scalable AWS & vector database, and secure access control.



Scalability & Sustainability: Efficiently handles large document volumes, ensures long-term adaptability with AI & cloud, and supports multi-user environments.

Operational Feasibility: User-friendly interface for easy document management, automated indexing for quick retrieval, and seamless enterprise integration.

Economic Viability: Cost-effective, optimized operational costs, and minimized manual effort.

IMPACT AND BENEFITS



Increased Efficiency

AI-powered summarization and search reduce manual document processing time.



Boosted Productivity

Quick retrieval and annotation features streamline workflows.

Scalability & Cost Savings

Cloud infrastructure scales easily, minimizing operational costs.

Data Security

Ensures secure, encrypted storage and compliance with privacy regulations.



RESEARCH AND REFERENCES

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<https://ieeexplore.ieee.org/document/10612458>

<https://ai.meta.com/tools/faiss/>

https://docs.aws.amazon.com/?nc2=h_ql_doc_do

<https://github.com/cat-lemonade/PDFDataExtractor>

[https://scholar.google.com/scholar?](https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=cloud+storage+for+faster+access&oq=cloud+storage+for+faster+a)

[cc#d=gs_qabs&t=1737558866674&u=%23p%3DCdfsRj3GYd4J](https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=cloud+storage+for+faster+access&oq=cloud+storage+for+faster+a&cc#d=gs_qabs&t=1737558866674&u=%23p%3DCdfsRj3GYd4J)

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CONCLUSION



The Smart PDF Search and Management System leverages AI, cloud infrastructure, and vector search to streamline PDF processing, enhance productivity, and improve decision-making. It provides secure, scalable solutions for summarization, annotation, and document retrieval, making it ideal for industries like legal, healthcare, and academia. With its cost-effective design and strong data security, the system offers a powerful tool for efficient document management.





Thank you

