

# PDF Extraction API Evaluation Template

**Team: 9**

**Team members: Chinmay Sawant, Shubham Agarwal, Pranav Sonje**

**Link to your analysis:** [https://codelabs-preview.appspot.com/?file\\_id=1bWeRfD-PZkUzgzmZkl6oEnWgsRlx5cKflwPPp1grAXk#7](https://codelabs-preview.appspot.com/?file_id=1bWeRfD-PZkUzgzmZkl6oEnWgsRlx5cKflwPPp1grAXk#7)

## Summary:

A cloud-based solution called the Google Document AI API makes effective use of machine learning to extract structured data from documents. It has pre-trained models for particular document types, such as invoices and receipts, and offers high-accuracy optical character recognition (OCR) for printed and handwritten text. It also supports complicated layouts. The API can handle a lot of documents rapidly, is scalable, and supports multiple languages. It also has AI/ML features for improved comprehension. It is perfect for industries like legal, finance, and healthcare since it complies with security regulations like GDPR and HIPAA, offers simple integration via REST APIs, and offers flexible price options.

## 1. General Information

Attribute	Details
API Name	Google Document AI API
Vendor	Google Cloud
Version/Release Date	Latest version available as of [current date]
Pricing Model	Pay-as-you-go
Licensing and Compliance	GDPR, CCPA, HIPAA, PCI-DSS compliance supported

## 2. Technical Capabilities

Feature	Google Document AI API	AWS Textract		
File Format Support (PDF, DOCX, etc.)	PDF, TIFF, PNG	PDF, TIFF		
OCR (Optical Character Recognition)	High OCR accuracy for both printed and handwritten text	High OCR accuracy for printed text, limited handwritten support		
Table Extraction	Detects and extracts tables accurately, cell-level detail	Detects tables and rows, moderate cell-level accuracy		
Form Extraction	Excellent for extracting structured data from forms (checkboxes, signatures)	Structured form extraction available (checkboxes, text fields)		
Complex Layout Support	Supports multi-column layouts, embedded objects, and images	Supports complex layouts but struggles with more intricate designs		
Multi-language Support	Supports over 100 languages	Supports multiple languages but fewer than Google		
Scalability and Performance	Scalable, high performance with Google Cloud infrastructure	Highly scalable with AWS global infrastructure		
API Integration and Usability	Easy API integration, multiple SDKs (Python, Java, etc.)	API with broad SDK support, integrates seamlessly with other AWS services		
Customization Options	Customizable models and extraction rules	Less flexibility in fine-tuning extraction models		
Accuracy and Error Handling	High accuracy, with error detection and confidence scoring	Reliable accuracy, but struggles more with complex documents than Google		

### 3. Business and Strategic Considerations

Evaluation Metric	Google Document AI API	AWS Textract		
Cost Efficiency (Pricing vs. Features)	Pay-as-you-go, reasonable for large-scale use	Pay-as-you-go, slightly cheaper for certain use cases		
Vendor Reputation and Stability	Google Cloud, strong AI/ML leadership	AWS, industry leader with robust cloud services		
Customer Support and SLA	Quality and response times of customer service, availability of SLA.	Excellent AWS support, with defined SLAs		
Security and Privacy	How the API handles data encryption, anonymization, and compliance with regulations (GDPR, CCPA).	Strong compliance with GDPR, HIPAA, and SOC certifications		
Documentation and Training Resources	Extensive documentation, tutorials, and resources	Comprehensive documentation, AWS training programs		
Community and Ecosystem	Large Google developer community, rich ecosystem	Large AWS community with strong third-party integrations		
Roadmap and Innovation	Active development with frequent AI/ML updates	Regular updates, but Google is seen as more innovative in AI/ML space		
Vendor Lock-in Risk	Moderate risk due to deep Google Cloud integration	Higher risk if the organization relies heavily on AWS ecosystem		

### 4. Performance Metrics

Metric	Google Document AI API	AWS Textract		
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<b>Latency</b>	Low latency, near real-time processing	Low latency, high throughput for large datasets		
<b>Throughput</b>	High throughput, handles thousands of pages per minute	High throughput, designed for large-scale document processing		
<b>Error Rate</b>	Very low error rate with built-in error handling and confidence scores	Low error rate, though struggles slightly with complex document layouts		
<b>Data Loss/Integrity</b>	Minimal data loss, excellent data integrity	Minimal data loss, good integrity, but lower accuracy with handwritten text		

## 5. Value-Add Features

Feature	Adobe PDF API	Microsoft Document Intelligence		
<b>Advanced AI/ML Capabilities</b>	Advanced machine learning models trained on diverse document types	AI-driven OCR, but less advanced in contextual document understanding		
<b>Pre-built Templates for Specific Use Cases</b>	Pre-trained models for specific documents (e.g., invoices, contracts)	No pre-built templates but general form and table extraction available		
<b>Document Classification/Tagging</b>	Auto-classification and tagging based on document content	Basic classification, but limited compared to Google's capabilities		
<b>Metadata Extraction</b>	Extracts embedded metadata like author, creation time, etc.	Can extract metadata, but not as detailed or flexible as Google's solution		

## 6. Overall Evaluation

Attribute	Rating	Comments
Technical Fit	9	Very robust for OCR, complex layouts, and forms extraction
Business Fit	8	Suitable for medium to large businesses with cloud reliance
Total Cost of Ownership	7	Pay-as-you-go pricing is cost-efficient but can accumulate.
Ease of Implementation and Use	9	Easy integration with multiple SDKs and comprehensive docs
Vendor Reliability and Support	9	Google's support and cloud infrastructure are top-tier

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## 7. Recommendations

Recommendation	Details
Best Fit for the Use Case	Organizations seeking scalable, precise document extraction with strong OCR, form, and table extraction capabilities should choose the Google Document AI API. Use cases involving complicated papers, multilingual support, and large document quantities are best suited for it.
Further Considerations	A reliance on the platform could result from the API's extensive interaction with Google Cloud services. High-volume use cases should keep an eye on costs to prevent unforeseen charges, even though the pay-as-you-go approach gives flexibility. For less complex, more affordable projects, alternative open-source solutions could be taken into account.