**Google Cloud Vision Optical Character Recognition**

# Final OCR Tool Selection Justification: Google Cloud Vision OCR

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| **Category** | Details |
| **Selected Tool** | Google Cloud Vision OCR |
| **Reason for Selection** | • Highest accuracy observed among tested OCRs (≥95%) on Japanese scripts (Kanji, Katakana, Hiragana). • Consistent extraction of clean text from historical, complex, and vertically oriented documents. • Reliable even on partially degraded or noisy scanned images. • API integration worked seamlessly with batch processing in Python. |
| **Advantages** | • Official support for Japanese scripts (Kanji, Katakana, Hiragana). • Handles vertical and rotated text very effectively. • Cloud scalability: no need for local hardware limitations. • Easy Python integration using `google-cloud-vision`. • Provides bounding boxes, confidence scores, and full-text extraction. • Professional documentation and support from Google. |
| **Link to Practical Testing (via Code)** | • Successfully batch-processed images using custom Python scripts. • Detected text correctly saved into structured `.xlsx` files for manual verification. • Organized images into new folders based on OCR results. • Minimal detection errors observed across different sample sets. • Fast enough to meet project timeline constraints. |
| **Risks / Limitations** | • Requires an internet connection for API calls. • Costs incurred if processing exceeds free monthly quota (1000 units). |
| **Final Justification Summary** | Based on comparative analysis, small-scale testing, and integration success, Google Cloud Vision OCR offers the best combination of accuracy, scalability, and ease of use for the project's specific needs, especially for accurate script identification and dataset preparation. |