Metric	EasyOCR	Tesseract	docTR	Keras OCR
Input Compatibility	Optimized for images, works directly with various formats (JPG, PNG,JPEG).	Supports images but struggles with noisy or skewed ones.	Works well with clean, structured images but less reliable for diverse real-world layouts.	Supports images but needs additional training for specific use cases.
Ease of Use	Straightforward, minimal setup, and easy integration via API.	Requires more setup and preprocessing to handle noisy or complex images.	Moderate; requires GPU setup and dependencies for best performance.	Requires more effort to customize and integrate.
Accuracy	High, works well for clear and slightly noisy text with good recognition rates.	Moderate, struggles with noisy images and complex layouts.	Accurate for structured data but less reliable on real-world unstructured text.	Moderate, focused on scene text but less precise for small/dense fonts.
Speed	Moderate, sufficient for small-to-medium datasets without requiring GPUs.	Fast but inconsistent for complex or non-standard layouts.	Fast on GPU but comes with additional hardware requirements.	Moderate; slower than EasyOCR without GPU optimization.
Preprocessing Needs	Minimal, works effectively on raw images.	Requires significant preprocessing (e.g., binarization, noise removal).	Minimal for clean input but less adaptable to diverse real-world challenges.	Preprocessing is necessary for achieving better accuracy.

Output Format	Plain text, simple to use for downstream tasks like PII detection.	Provides plain text and structured formats but needs parsing for further use.	Outputs text with layout (bounding boxes), not critical for this project.	Outputs bounding boxes and text but requires further processing for structured results.
Multilingual Support	Supports 80+ languages, robust for varied scripts and scenarios.	Supports many languages but struggles with mixed or complex scripts.	Limited language support, mainly for English-centric tasks.	Custom language training is required.
Handling Curved/Noisy Text	Effective, can handle curved and moderately noisy text well.	Struggles with curved text and requires preprocessing for noisy data.	Performs poorly on curved or unstructured text.	Moderate; training required for specific challenges.

ocr	**CPU execution time**	**GPU execution time**
easy ocr	9m 53s	3m 21s
keras ocr	12m 43s	4m 43s
docTR	5m 38s	1m 11s
normy py ocr	14.42 seconds	5s
CV enh ocr	69.65 seconds	31.22s