

python Main.py

## OCRify User Manual

### 1. Introduction

OCRify is an advanced desktop application designed to convert images into editable digital text using Optical Character Recognition (OCR). Beyond simple extraction, OCRify provides deep insights through text analytics, word frequency analysis, dictionary definitions, and detailed image metadata inspection.

### 2. Installation & Setup

#### 2.1. System Requirements

- **Python:** Python 3.x must be installed.
- **Tesseract OCR Engine:** Required for text recognition.
  - **Windows:** Install using the Tesseract installer.

#### Linux:

```
sudo apt install tesseract-ocr
```

#### macOS:

```
brew install tesseract
```

#### 2.2. Installing Dependencies

Navigate to the project folder and run:

```
pip install -r requirements.txt
```

#### 2.3. Launching the Application

To start OCRify, run:

### 3. Interface Overview

The OCRify interface is divided into two main sections:

#### Left Panel – Image Workspace

- Load image files
- View image previews
- Access core buttons (Load, Extract, Save)

#### Right Panel – Analysis Results (Tabbed Interface)

- **Extracted Text:** Displays raw OCR output
- **Analytics:** Word counts, frequency charts, definitions
- **Metadata:** Technical image data and EXIF information

### 4. How to Use OCRify

#### 4.1. Loading an Image

You can load an image using:

- **Button Method:**  
Click **Load Image** or press **Ctrl + O** and select your file.
- **Drag & Drop:**  
Drag an image file directly into the Image Workspace.

**Supported Formats:** PNG, JPG, JPEG, GIF, BMP, TIFF, TIF

#### 4.2. Extracting Text

1. Ensure an image is loaded.

2. Click **Extract Text** or press **Ctrl + E**.

3. A progress bar will appear to indicate processing.

4. After extraction, the interface automatically switches to the **Extracted Text** tab.

Click **Save Results** or press **Ctrl + S**.  
Choose between:

- **Text File (.txt):**  
Saves extracted text with filename and timestamp.
- **JSON File (.json):**  
Saves extracted text plus full metadata and timestamp.

### 4.3. Analyzing Text

Go to the **Analytics** tab to view:

- **Statistics:** Total words, characters, and lines
- **Word Frequency:** Top 10 most used words with percentages
- **Unique Word Discovery:**
  - Identifies words appearing only once (longest unique word highlighted)
  - Fetches definitions and pronunciation from an online dictionary API

### 4.4. Viewing Metadata

Switch to the **Metadata** tab to view:

- **File Info:** File size, creation date, modification date
- **Image Properties:** Dimensions, aspect ratio, color mode
- **EXIF Data:** Camera model, ISO, aperture, exposure time (if available)

### 4.5. Saving Results

## 5. Application Settings

Open the **Settings** menu to modify behavior:

- Auto-extract text: Automatically runs OCR when an image loads
- Enable auto-save: Toggles auto-saving features

## 6. Keyboard Shortcuts

Shortcut	Action
<b>Ctrl + O</b>	Load a new image
<b>Ctrl + E</b>	Extract text from image
<b>Ctrl + M</b>	Extract metadata only
<b>Ctrl + S</b>	Save results
<b>Ctrl + Q</b>	Quit application
<b>F1</b>	Open Help menu

## 7. Troubleshooting

Issue	Possible Cause	Solution
<b>"Tesseract OCR not found"</b>	Tesseract not installed or not in PATH	Install Tesseract or set path manually in <code>Main.py</code> .
<b>No Text Extracted</b>	Poor image quality or no detectable text	Use a clearer image; ensure text is horizontal.
<b>Dictionary Definition Missing</b>	No internet or API error	Check internet connection; API uses <code>api.dictionaryapi.dev</code> .
<b>Drag &amp; Drop Not Working</b>	Missing library	Install <code>tkinterdnd2</code> via pip.