Master Reference for Coloring Pipeline Project Files

This document is a master reference for all essential files in the Coloring Pipeline project, including their purpose and recommended usage. It is designed to prevent accidental overwrites and clarify file roles.

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1. `process_coloring_pipeline.py`

- **Type:** Python script
- **Purpose:** Main pipeline script that:
- Cleans PNGs with ImageMagick
- Traces images to SVG with Inkscape
- Exports PNG and PDF files
- Automatically creates folder structure if missing
- Moves PNGs next to the script into `input_png`
- **Usage:**

```
python process_coloring_pipeline.py          # Process PNGs
python process_coloring_pipeline.py --overwrite   # Force reprocessing
python process_coloring_pipeline.py --?          # Show full README
instructions
python process_coloring_pipeline.py -h          # Show standard usage help
```

- **Notes:** Do not rename this file; script references relative paths based on its location.

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2. `README.md`

- **Type:** Markdown documentation
- **Purpose:** User-facing instructions for:
- Pipeline overview
- Folder structure
- Usage instructions (`--?` and `--help`)
- Notes, best practices, and dependencies
- **Usage:** Users can read it for workflow guidance or view it with `python process_coloring_pipeline.py --?`
- **Important:** Never overwrite this with installation instructions; keep separate from `INSTALLATION.md`.

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3. `INSTALLATION.md`

- **Type:** Markdown documentation
- **Purpose:** Installation and configuration instructions for:
- Python 3.x
- ImageMagick (with PNG support)
- Inkscape
- PATH verification
- **Platform Coverage:** Windows, macOS, Linux
- **Usage:** Read before running the pipeline for first-time setup.
- **Important:** Keep this file separate from README; do not merge content.

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4. Project Folders (Auto-created by Script)

- `input_png/` : Source PNGs to be processed.
- `cleaned_png/` : Intermediate PNGs after cleaning and thresholding.
- `svg/` : Vector outputs from tracing.
- `png/` : Exported PNGs for printing.
- `pdf/` : Exported PDFs for printing.

Notes: - Users can drop their images next to `process_coloring_pipeline.py`; the script will auto-move them to `input_png/`. - These folders are created automatically if missing; do not manually delete unless you intend to clear outputs.

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5. Logging

- **File:** `process.log`
- **Purpose:** Tracks all processing steps and errors.
- **Location:** Project root
- **Notes:** Do not edit manually; review for troubleshooting.

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6. General Best Practices

- Keep `README.md` and `INSTALLATION.md` distinct.
- Avoid placing unrelated files in the script folder to prevent accidental moves.
- Always use `--?` or `-h` to check instructions before processing.
- Maintain a backup of any original images before processing.

This master reference ensures that all files are clearly documented, and you have a reliable source to prevent accidental overwrites.