Metadata Sanitization for Privacy ft. MAT2
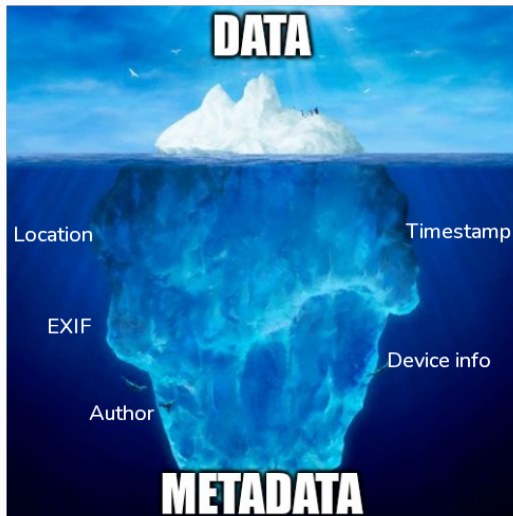
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It's useful

- Descriptive information in digital media

- Traceability and originality

- Compliance with regulatory policies

Then what's the problem?

- Reveals sensitive information

- Can be used for surveillance and user profiling

- Possibilities for targeted attacks

The Metadata Fatigue

'Resorting to sending or processing files without metadata sanitization due to manual efforts and complexities, irrespective of being aware of the consequences. '

Enter MAT2

What?

Metadata anonymization toolkit

A Python-based library and CLI tool used for removal of metadata from different file formats by integrating with other free software tools for metadata extraction and processing.

Warning

Usage of metadata removal tools might result in reduction in quality, accessibility issues (in case of PDF).

Furthermore, usage of MAT2 does not guarantee removal of all traces of metadata since it's dependent on accuracy of the tool used for identification of metadata.

Why?

Free and open-source software
MAT2 is licensed under GNU General Public License 3

Scripting
CLI version allows integration with other tools for input processing

Library
`libmat2` allows integration of metadata removal at application level

Graphical User Interface
Integration with Dolphin (KDE's file manager) and web application for intutive processing

Installation

Pre-requisites

Install these packages from your package manager. It's recommended to use *nix/macOS.

- Python 3.5+ and pip
- **mutagen** for audio
- **cairo** and **poppler** for PDF
- **gir1.2** for image and SVG
- **pipx** for installing mat2

Optional dependencies

- **exiftool** for generic processing
- **ffmpeg** for video processing

Installation of MAT2 CLI

It's recommended to use **pipx** over **pip** for installation of Python binaries to avoid maintenance issues and conflicts with system packages.

```
pipx install mat2
```

You should be able to access MAT2 via the CLI. Check if it's been installed using:

```
mat2 -v
```

Usage

Check metadata

Check for the presence and type of metadata present in single or multiple files using **show** (**-s**) flag

```
mat2 -s file [files...]
```

Usage
```
mat2 -s picture.png file.pdf
```

Remove metadata

Remove the detected metadata associated with the file(s) with a backup (saved with *.cleaned.<extension>*)

```
mat2 file [files...]
```

Usage
```
mat2 picture.png file.pdf
```

Partial metadata removal

In case of an already compressed file, inconsistencies in file upon using MAT2 (lack of accessibility in PDF, quality loss) or need to preserve some metadata, you can use the lightweight mode using (**-L**) flag

```
mat2 -L file [files...]
```

Usage
```
mat2 -L picture.png file.pdf
```

Extras

mat2-web - Easy-to-use web interface
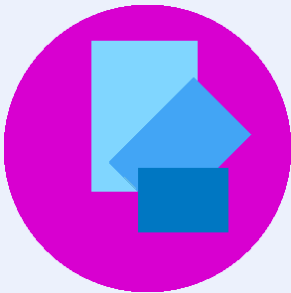
Ready to use
Hosted service for easy removal of metadata from files or camera pictures

Self-hosting
Can be self-hosted using containers, Ansible or manually for maximum control over processing of sensitive data

Useful mobile applications

ImagePipe

Remove metadata and resize images before sending them

LibreCamera

Remove metadata while taking pictures

If you're wondering whether you need this because you have nothing to hide or aren't doing anything significant, remember that privacy is an inherent right, not a privilege.

Get in touch

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References

- What Is Metadata? Types of Metadata and Its Role in Compliance and Investigation
- MAT2
- MAT2 Web