

OPUS VERMICULATUM VITREUM (O.V.V.)

Tutorial

This filter is trying to give to a photo the approximate look of a mosaic Roman style, AKA *Opus Vermiculatum*. The added adjective (Vitreum) is due to the intention of giving to the final result a look as if the tiles were of a glassy material.

Also this one comes from a long period of attempts, with up and down phases of positive or negative results.

Preamble

A “real” mosaic is always build on the base of a specific type of composition, made of stylized figures and background, with very simplified details.

Because these filters take in input common photos, DO NOT EXPECT to see an outcome looking as a “real” mosaic, but only an approximation.

The filter(s)

O.V.V., like my lately released filters Free Painting or Aquarelle++, is a complex (*but not “complicated”*) filter.

Because of this complexity of the available options for the user the “BASE” filter is accompanied by a “PRESET” management front-end.

The source image may be classified as belonging to one of these types:

1. "portrait",
2. "flower",
3. "forest",
4. "animal",
5. "landscape",
6. "seascape",
7. "cityscape".
8. “people”
9. “plain”
10. “lake”

Otherwise it may be considered “generic”

Flow of the BASE filter

- ◆ Create the work image on the base of the size entered (from 1600 to 4000) and the aspect ratio of the original image
- ◆ Save this image having original colours and values (not modified)
- ◆ Stretch the colours using an embedded ancillary function (optional)
- ◆ Apply a selective gaussian blur
- ◆ Remove almost black and almost white pixels
- ◆ Increase a bit the saturation
- ◆ Add a Layer (duplicate BG) and run G'mic Posterize
- ◆ Add a duplicate of the last drawable for contours
- ◆ Run Gimp DoG filter to create Contours, threshold B&W and keep only the contours
- ◆ Duplicate and refine contours using G'mic Isophote Thinning
- ◆ Add a Layer (duplicate of last drawable), select the black areas and run Gimp RobA Mosaic tile helper (function embedded)
- ◆ Select the contours and save the selection
- ◆ Create a work brush of 1 pixel with default spacing 1000 (= 10 pixels)
- ◆ Add a layer (duplicate of RobA output), stroke both the Contour and the Path generated by RobA to create the Dots
- ◆ Remove the path and the selection
- ◆ Add a Layer (duplicate of the Dots layer) and run G'MIC Skeleton to create the tiles
- ◆ Remove all intermediate layers, keep only the Skeleton
- ◆ Create a new layer from visible combining the whole grid (Skeleton and Contours)
- ◆ Remove the two component layers (Skeleton and Contours)
- ◆ Add an external border around the image
- ◆ Keep only the full grid layer, select and save the selection
- ◆ Duplicate the posterized layer, cut the grid, chisel/bevel the tiles (normal mode)
- ◆ Duplicate the posterized layer again and repeat the steps (hard-light)
- ◆ Duplicate the BG layer
- ◆ Cut the grid, chisel/bevel the tiles (LCH color)
- ◆ Duplicate again and repeat the steps (grain merge)
- ◆ Upscale (double) the Work image, to generate the Final Outcome
- ◆ Add the chosen Light Effect (if any)
 - ... or simply do a selective blur to have a fake glass look

- ◆ **Add the chosen Glass Effect (if any)**
- ◆ **Duplicate the Grid layer on top to reinforce the visibility**
- ◆ **Flatten the image if requested by the user**
- ◆ **Remove blacks values and a bit of white values to improve the glass look**
- ◆ **Duplicate the final outcome if Shine requested**

Prerequisite

chisel.scm (by Rob Antonischen)

Practical hints

The Base filter is released with a companion Front-End filter with predefined presets, one for each type of source image; each preset is a plain text file with a defined “syntax” (have a look inside), then a “set of presets” is grouping them and has a name which is referenced in the front-end filter (default is *MyOVVpresets*).

The suggestion is to start practicing with the filter(s) using the presets values. Then modifications to deal with the personal taste can be added, step by step. Below a sample of one preset and the presets folder provided.

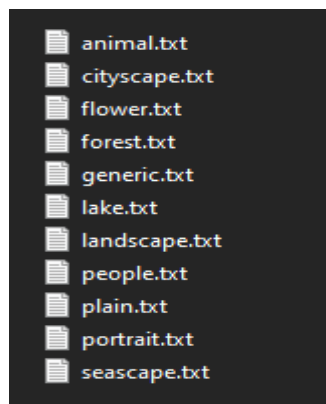
file portrait.txt

inColours=12
stretch_RGB=1
restore_original=1
tileSize=3
lightEffect=8
glassEffect=8
doShine=1

the left part of the line is fixed (*the program looks for a line starting with **inColours=** for instance*)

the right part is the numeric user option of the parameter (look at the main “BASE” filter parameters for the meaning; for instance **doShine=1** means apply Linear Light Mode to the top layer.

Preset folder **MyOVVpresets**



STARTING THE FILTER(S)

Let's consider the first start(s) of the filter(s).

We assume you have:

- installed both filters (the “BASE” and the “FRONT-END”) under plug-ins
- installed (and activated if you are using Ofnuts'ACM) the texture pack **SG_Patterns**
- installed (and activated if you are using Ofnuts'ACM) the RobA script **chisel.scm**

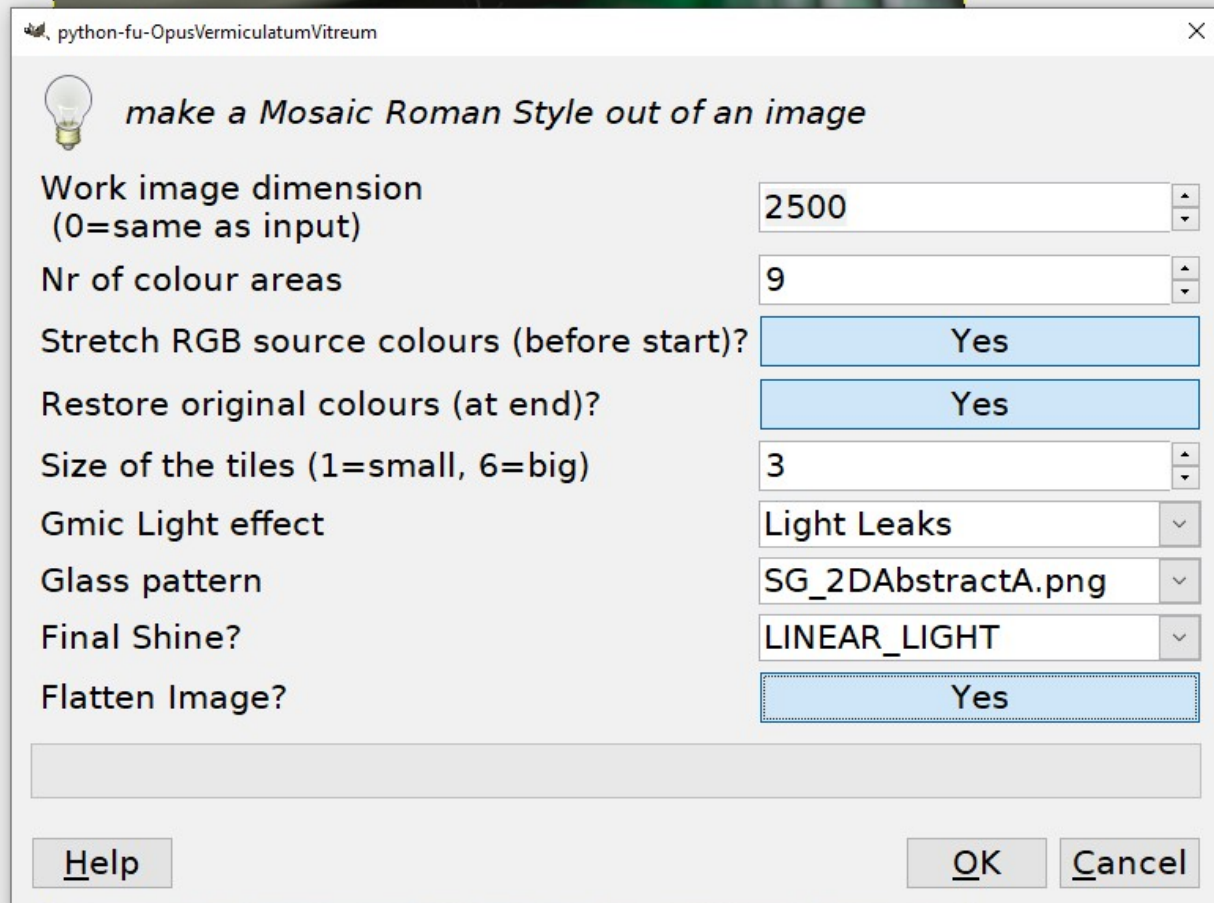
Step1: OPEN AN IMAGE

In the tutorial we choose a portrait (an image from Pexels, cropped).



Step2: START THE MAIN FILTER

To initiate in the simplest way we start using the Main filter without the “help” of the Front-End Presets Manager



The image shows a screenshot of a software window titled "python-fu-OpusVermiculatumVitreum". Inside the window is a dialog box with a lightbulb icon and the title "make a Mosaic Roman Style out of an image". The dialog box contains several settings:

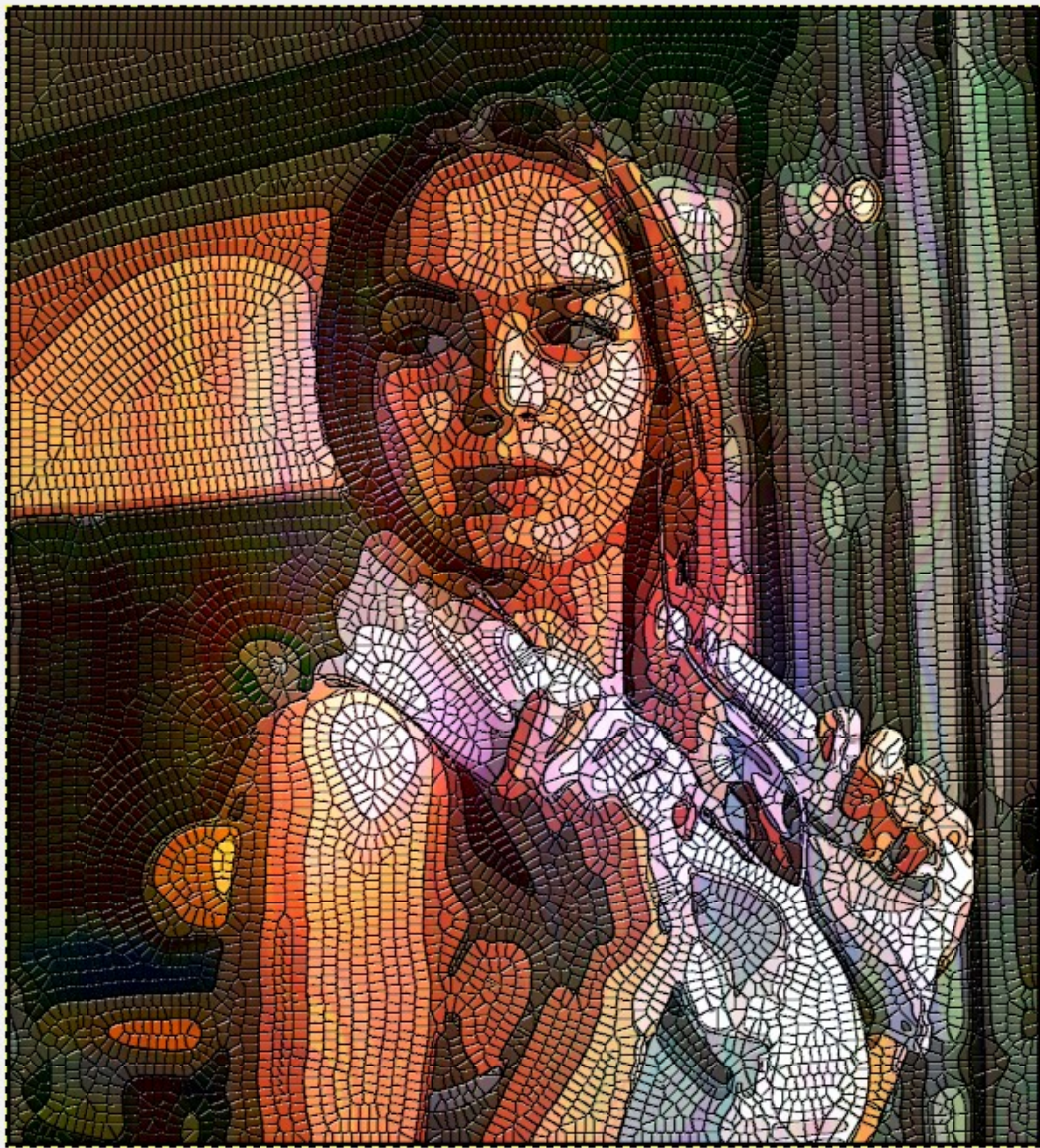
- Work image dimension (0=same as input): 2500
- Nr of colour areas: 9
- Stretch RGB source colours (before start)? Yes
- Restore original colours (at end)? Yes
- Size of the tiles (1=small, 6=big): 3
- Gmic Light effect: Light Leaks
- Glass pattern: SG_2DAbstractA.png
- Final Shine? LINEAR_LIGHT
- Flatten Image? Yes

At the bottom of the dialog box are three buttons: "Help", "OK", and "Cancel".

As you can see, the filter starts with:
9 colours
... and other options choices

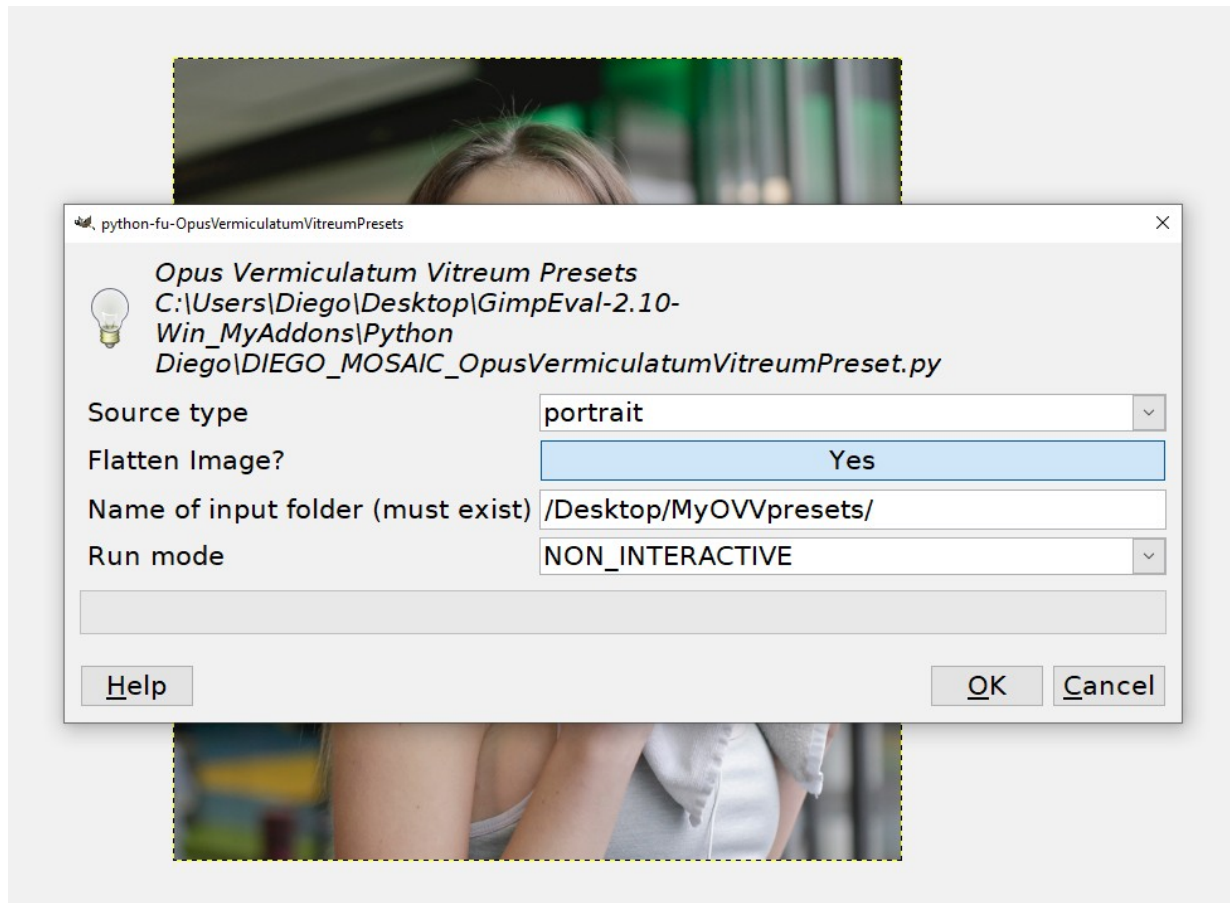
Step3: LOOK AT THE STANDARD OUTCOME

This is the standard outcome you get.



Step4: START THE FRONT-END PRESETS MANAGER

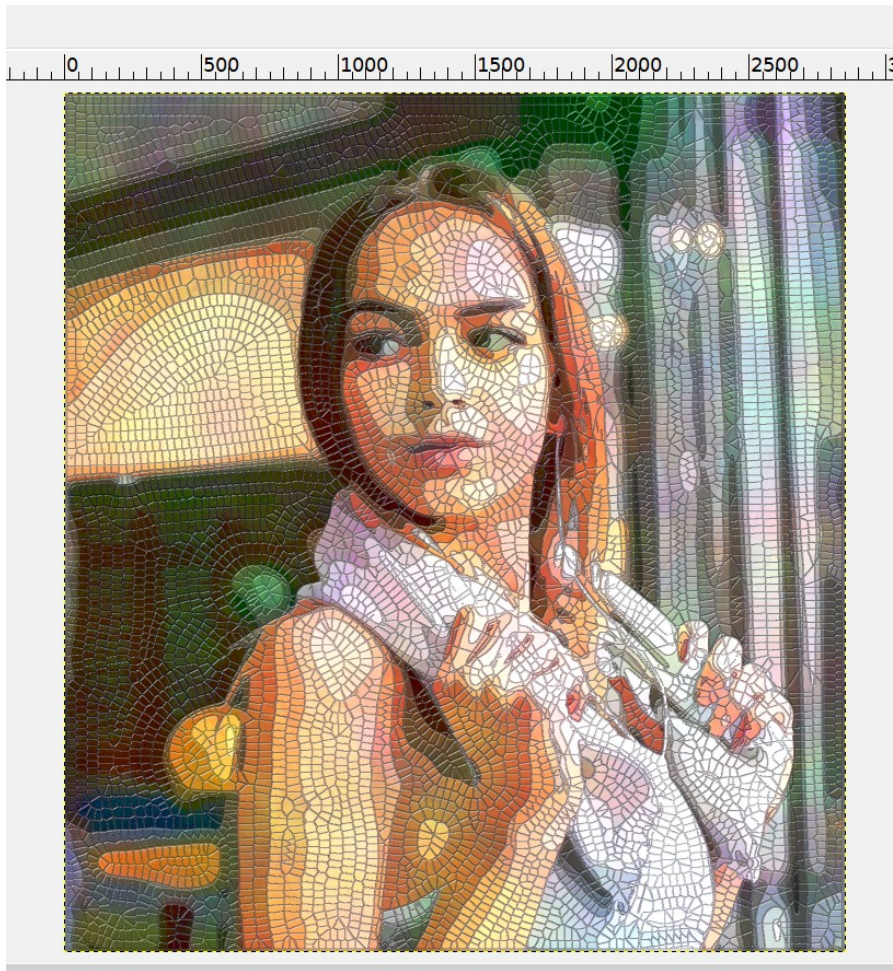
To complete your first contact with the filter(s), now choose to start the Front-End Presets Manager.



Select “portrait”

Note: if you change the RUN_MODE, the Main Filter is started directly, without any preset activated

STEP5: Look at the result when choosing the specific Preset



As you see there is a noticeable difference, because of the changed run parameters set by the Front-End for a Portrait image: (those in red are changed compared to the std) :

```
inColours=12  
stretch_RGB=1  
restore_original=1  
tileSize=3  
lightEffect=8 ("Turbolence 3")  
glassEffect=8 ("SG_EChrome.png")  
doShine=1
```

also: the work image dimension has been set to 3000 instead of 2500

MY CONCLUSIONS

Dear users,

in spite of the fact that these filters are complex (i.e. created with many bits and bytes) the use can be simple.

A) if you like to play with parameters which meet your look requirements, just use the Main Filter (you should experiment with the parameters)

B) if you like the specific look as pre-determined by the author's presets , just use the Front-End Filter, simply specifying the source image type

C) if you like to fix a look which meets your requirements for specific image types, create your own presets and use the Front-End Filter, specifying the source image type

To further personalize the outcomes:

a) create and select a glassy texture you better prefer