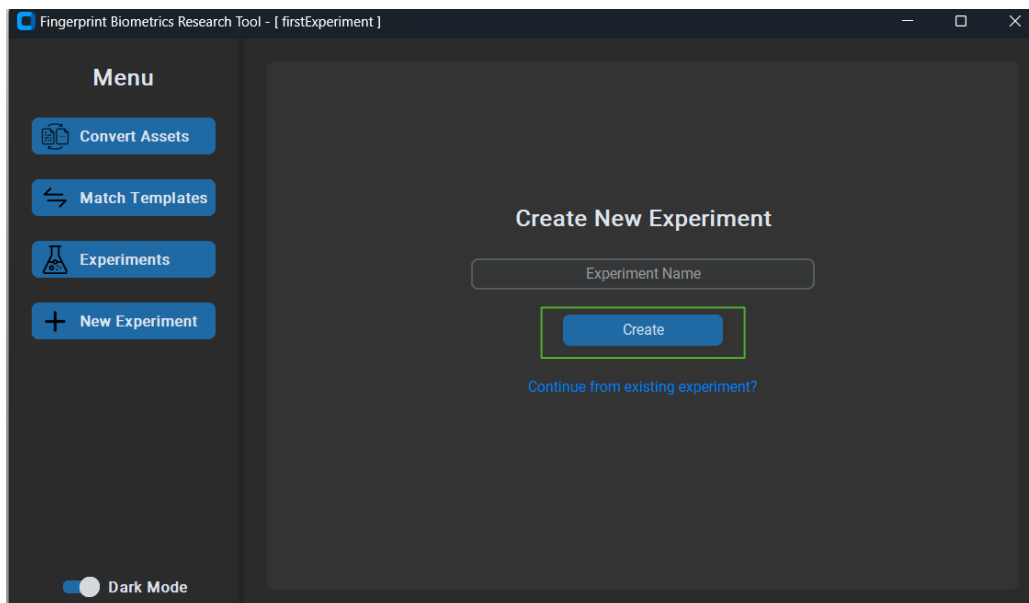


User Manual

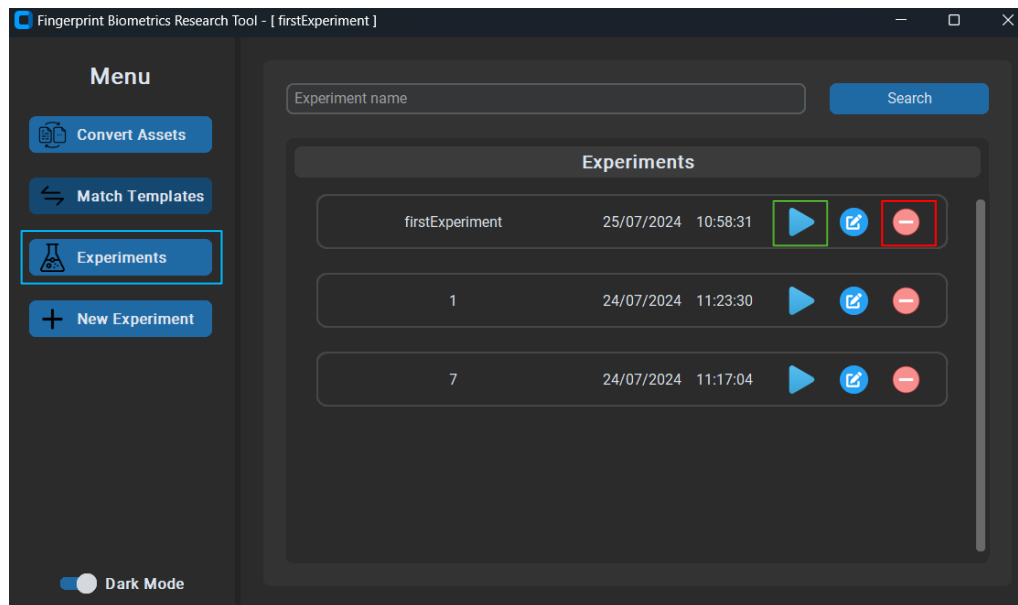
Fingerprint Biometric Research Tool

Creating New Experiment

To create a new experiment, enter the new experiment name in the textbox and click the create button signed with green in the figure below.



Experiments Management



Display All Experiments

To display all experiments, click on the Experiments button in the side menu signed in blue as shown in the figure above.

Delete Experiment

To delete an experiment, click the delete icon button signed in red as shown in the figure above.

Continue Experiment

To continue from an experiment which means that all the operation you will be performing are going to belong to this experiment, click the triangle icon button signed in green in the figure above.

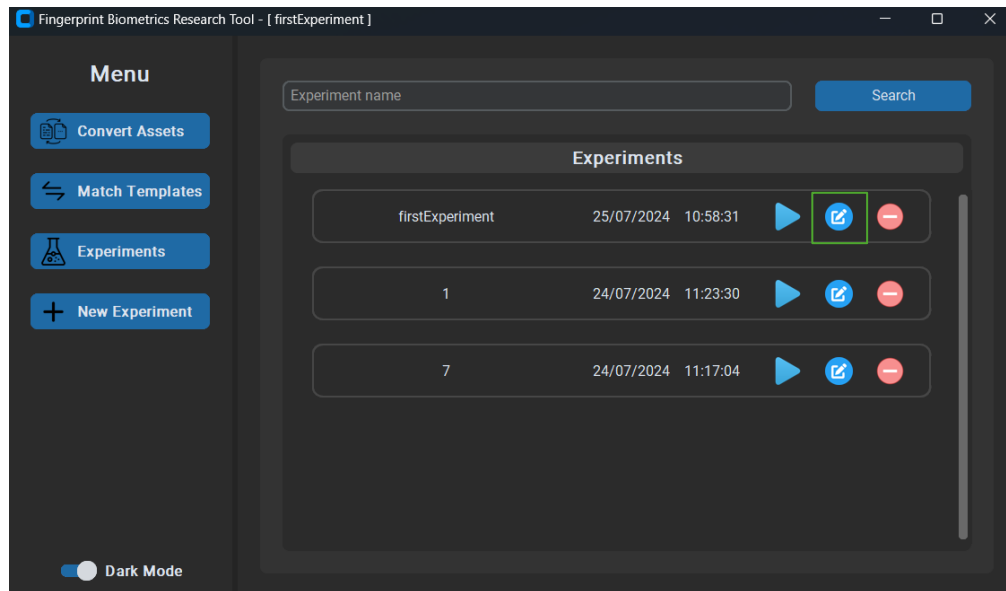
Note: current experiment will be shown between square brackets in the application title.

Search Experiments

You are able to search an experiment under by typing the keywords search in the text box entry, mainly the search is performed by experiment name.

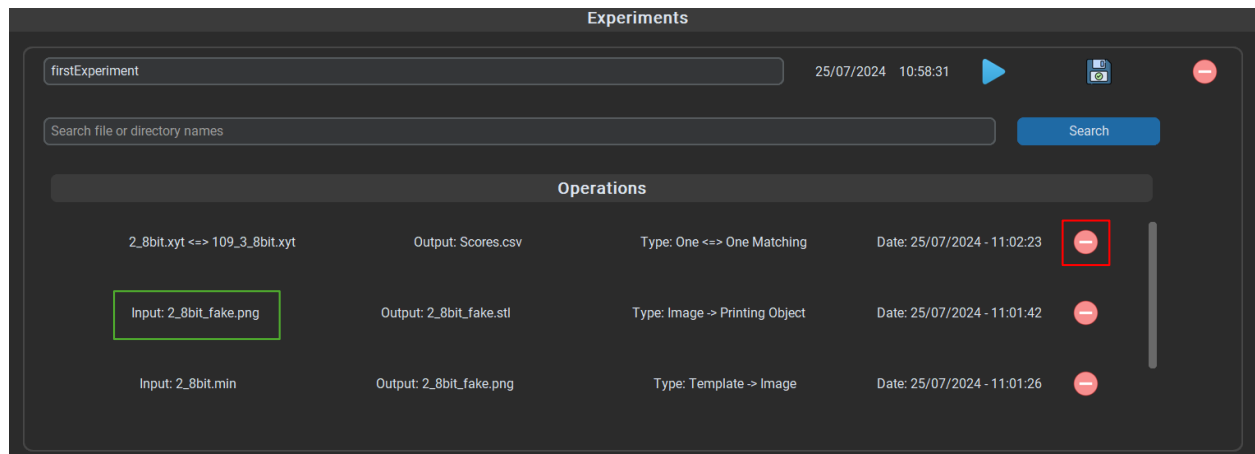
Display All Operations

To display all the operations that have been performed in specific experiment, click the edit icon as show below in the desired experiment.



Then you will see all the operation with each operation's details such as input, output, the operation type and the date of the operation.

You will also be able to view the converted assets below by just clicking the input or output for single conversions as shown below.



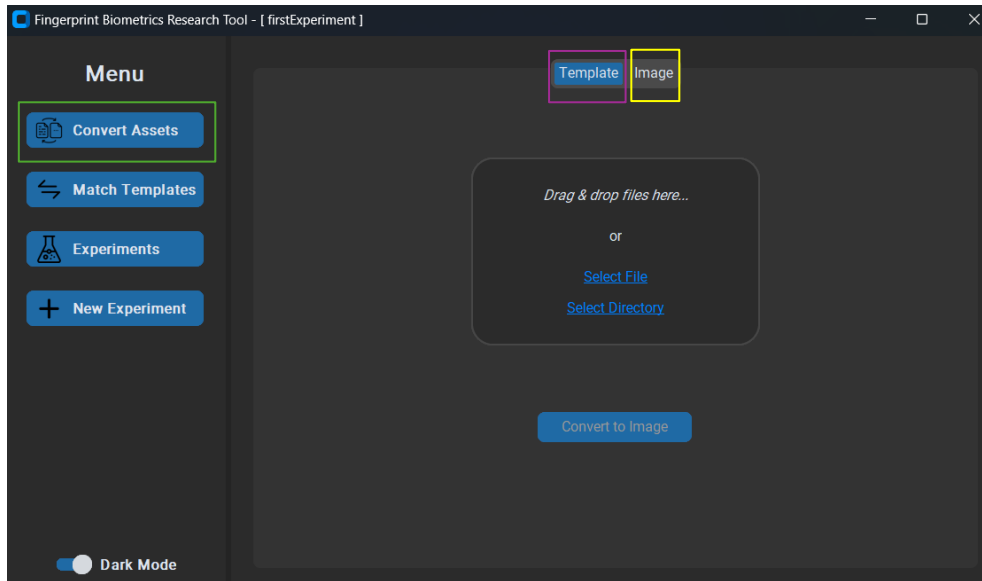
Delete Operation

To delete an operation, click the delete button signed in red in the figure above.

Searching Operation

You are able to search an operation under specific experiment by typing the keywords search in the text box entry, mainly the search is performed by the assets name.

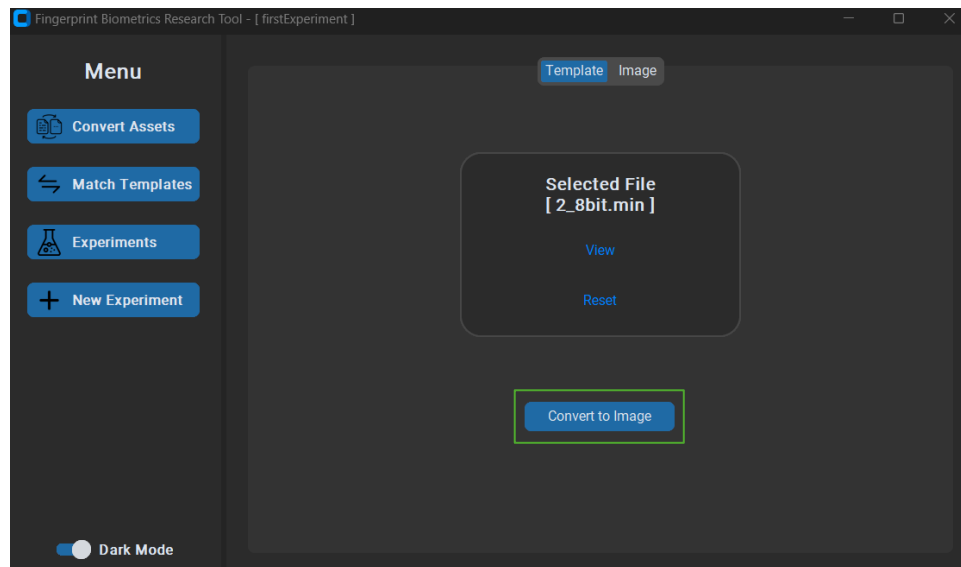
Assets Conversion



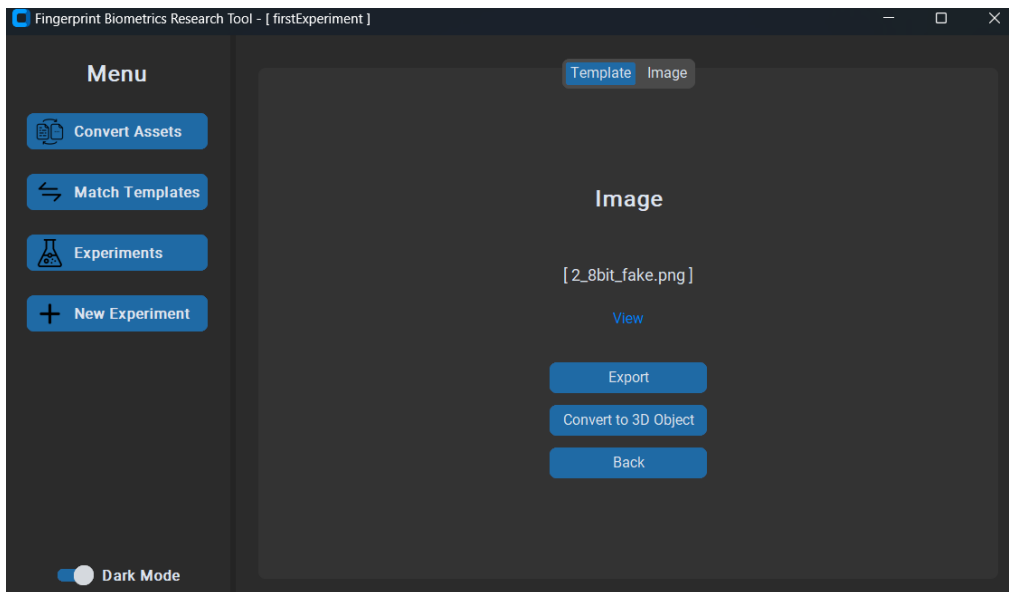
Click the convert assets button in the side menu signed with green.

Generate Fingerprint from Template

To generate a fingerprint template just click the template tab signed with purple in the above figure and import the template either by drag and drop or selecting from your local files, then click on convert to image button as show below.



You can also view the template and see the minutiae map image by clicking the view label under the selected file.



Once the conversion is finished, you will be forwarded to this page above. From this page, you can:

View Generated Fingerprint Image

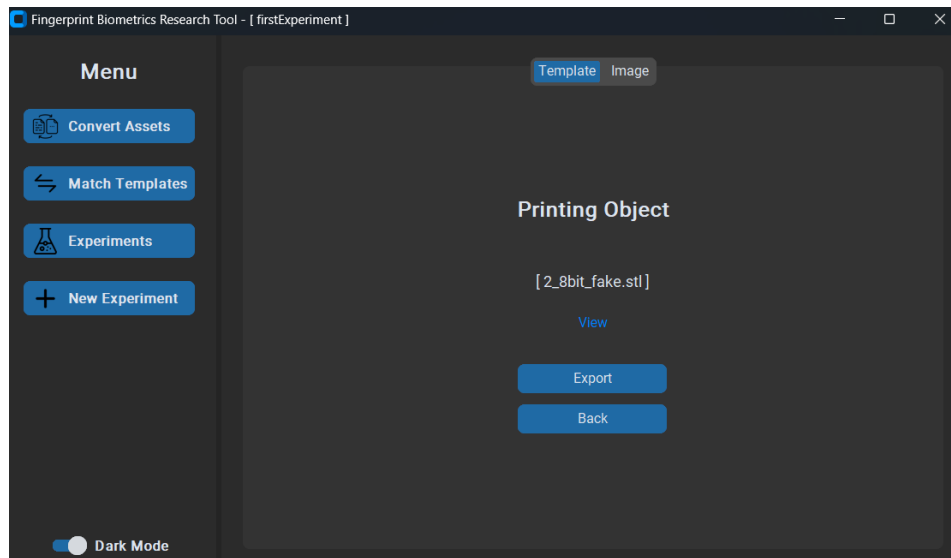
View the generated fingerprint image by clicking the view button under the image name.

Export Generated Fingerprint Image

Export the generated fingerprint image by clicking the export button.

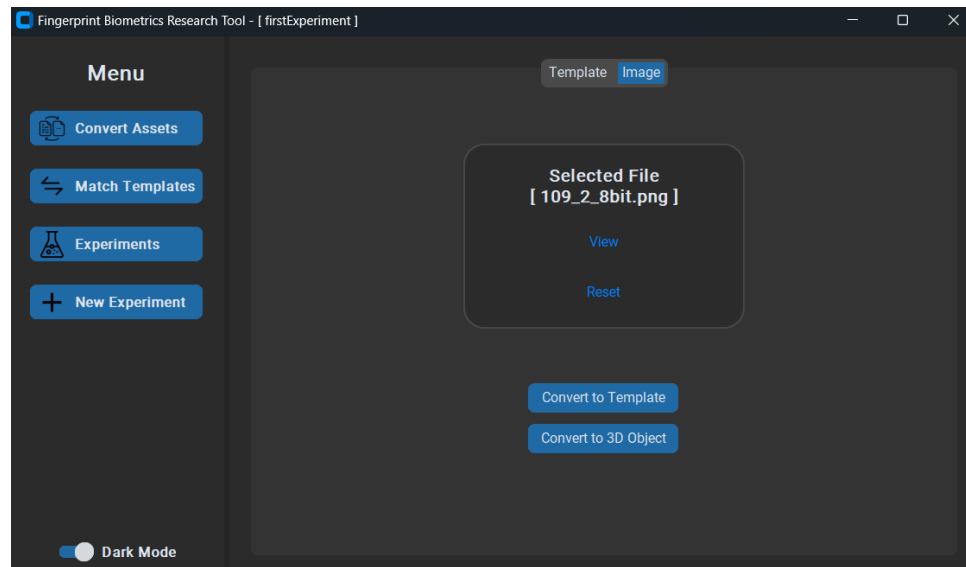
Convert to 3D Printing Object

Continue to convert the generated fingerprint image to a 3D fingerprint printing object.



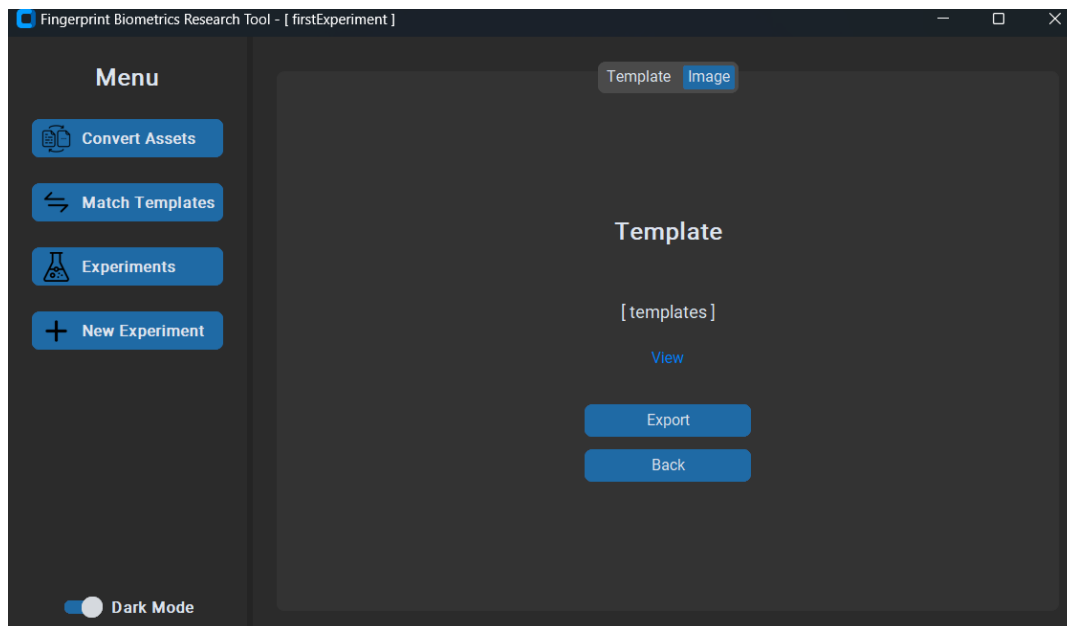
From this page, you will be able to view the printing object by clicking the view button under the file name, also you can export the printing object file to your local storage.

Extract Minutiae from Fingerprint Image



First click the image tab above in the figure signed with yellow, import the fingerprint image to the system either by drag and drop or by selecting a file or directory, from this page you can view the imported fingerprint image.

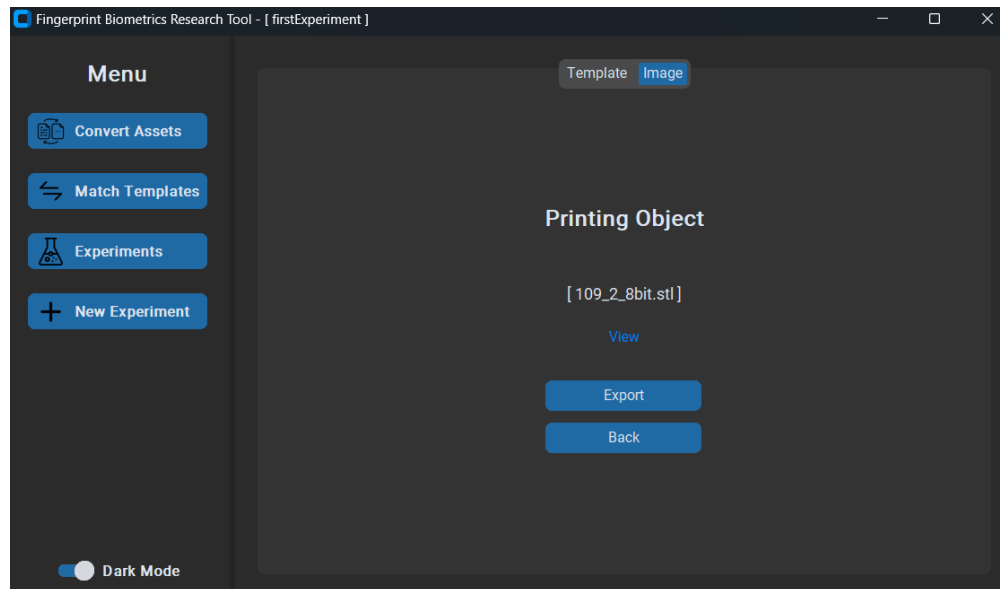
Click the convert to template button to convert the image to a template then you will be displayed the page in the figure below.



In this page you can view the generated template (extracted minutiae) by clicking the view button under the file name. Also, you can export the generated template to your local files.

Converting Fingerprint Image to Printing Object

As shown in the previous figures, import a fingerprint image then click the convert to 3D object button. You will be displayed the page shown in the figure below.



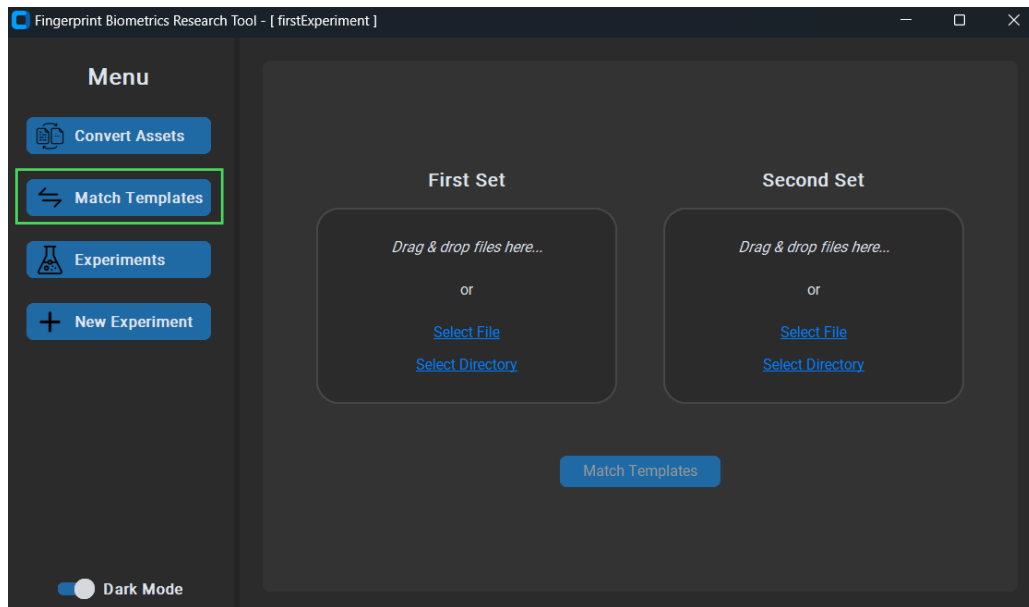
3D Printing Object Visualization

You can view the 3D printing object by clicking the view label under the file name, a new window will be opened which renders the printing object and allows you to rotate the object and controlling the viewing angle.

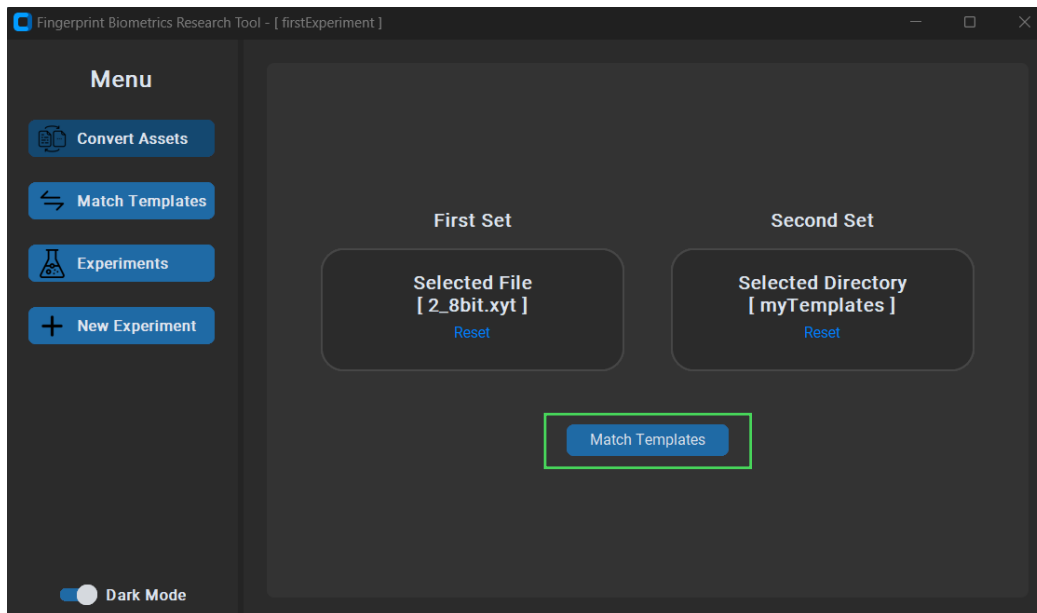
Export 3D Printing Object

You can export the 3D fingerprint printing object to your local files by clicking the export button in this page, the file will be (.stl) format which can be 3D printed later in 3D printing labs.

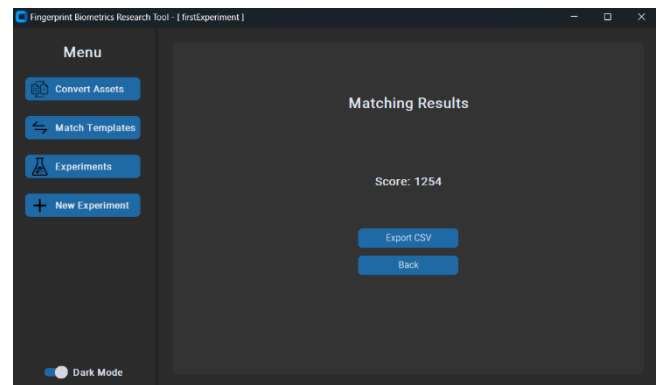
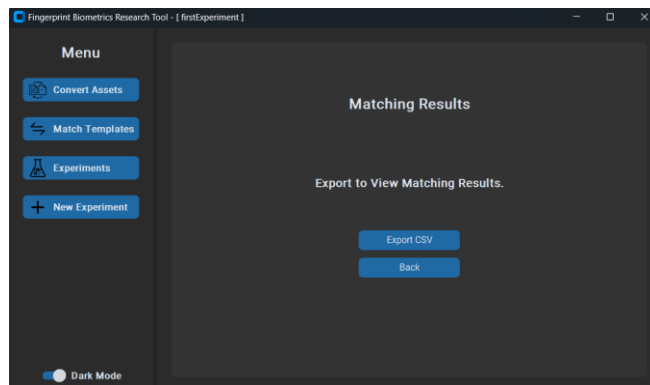
Matching Templates



Click the match templates button in the side menu signed with green, then import 2 sets of templates which can be either a single (.xyt) template file or directory of templates.



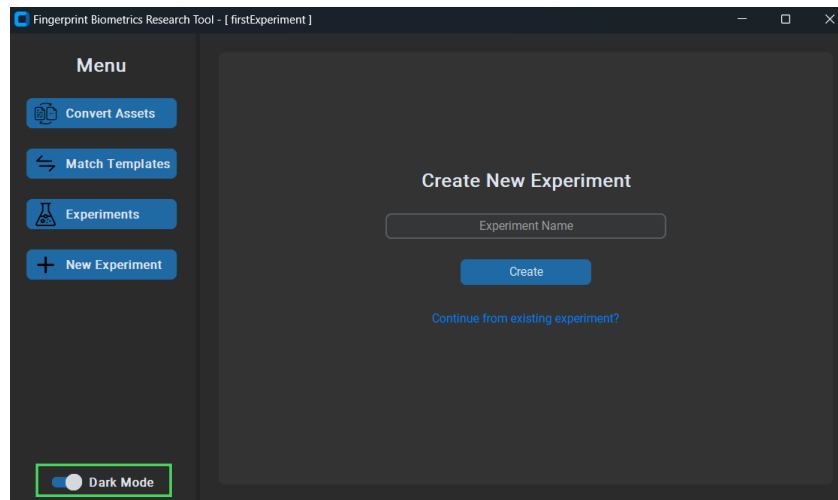
Once you imported the templates, click on match templates to perform the matching, you will be displayed the page shown in the figure below.



In case of multi templates (i.e. directory) conversion, you must click the export csv button to view the scores of each one with each one of the other templates in the second set.

In case of single templates, you can directly see the matching score.

Changing Application Theme



To change just click switch toggle button once and it will be change to light mode, to change back to dark mode just click the switch button again as shown below.

