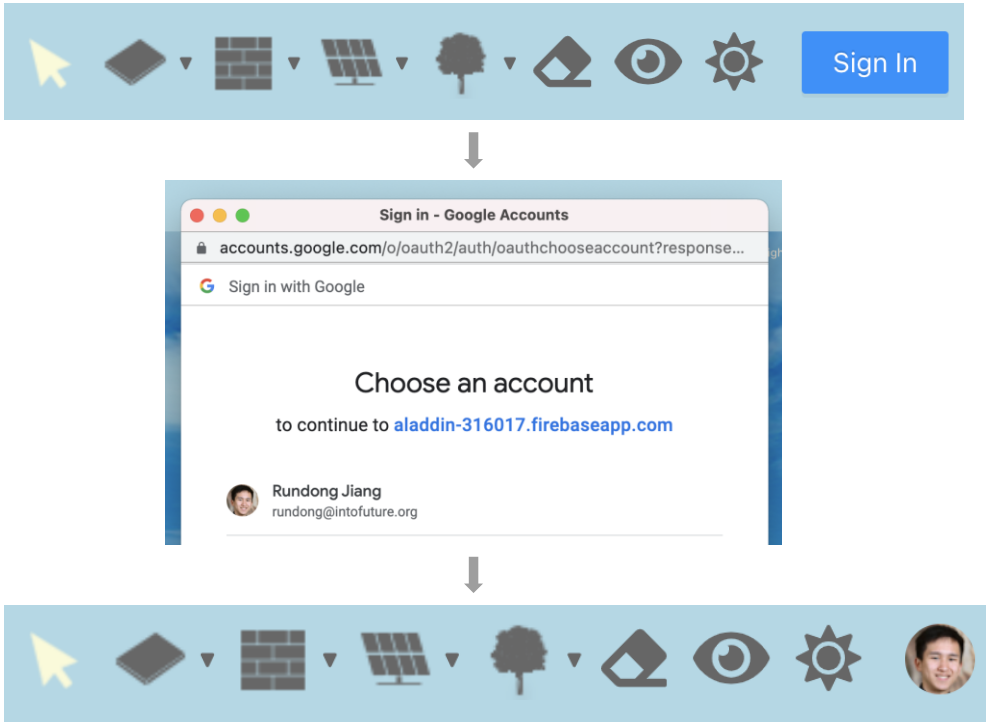
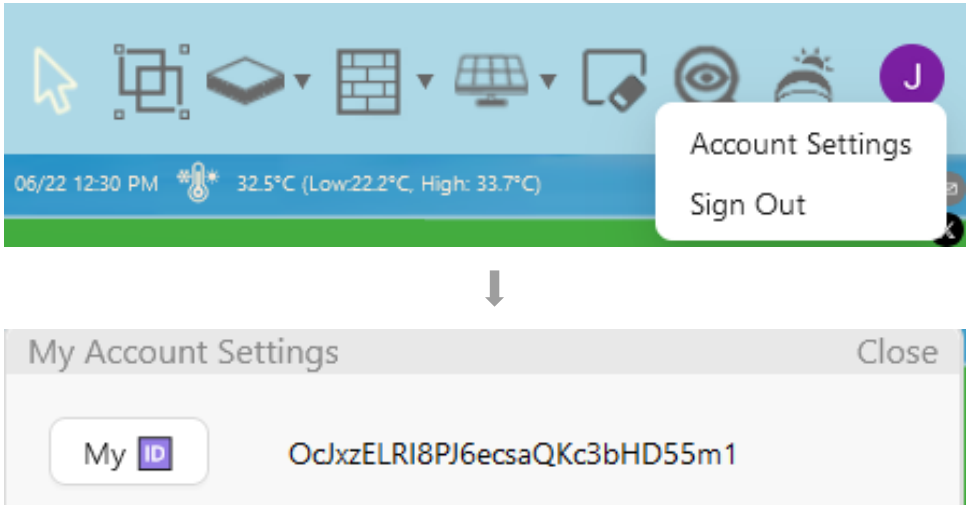
Aladdin

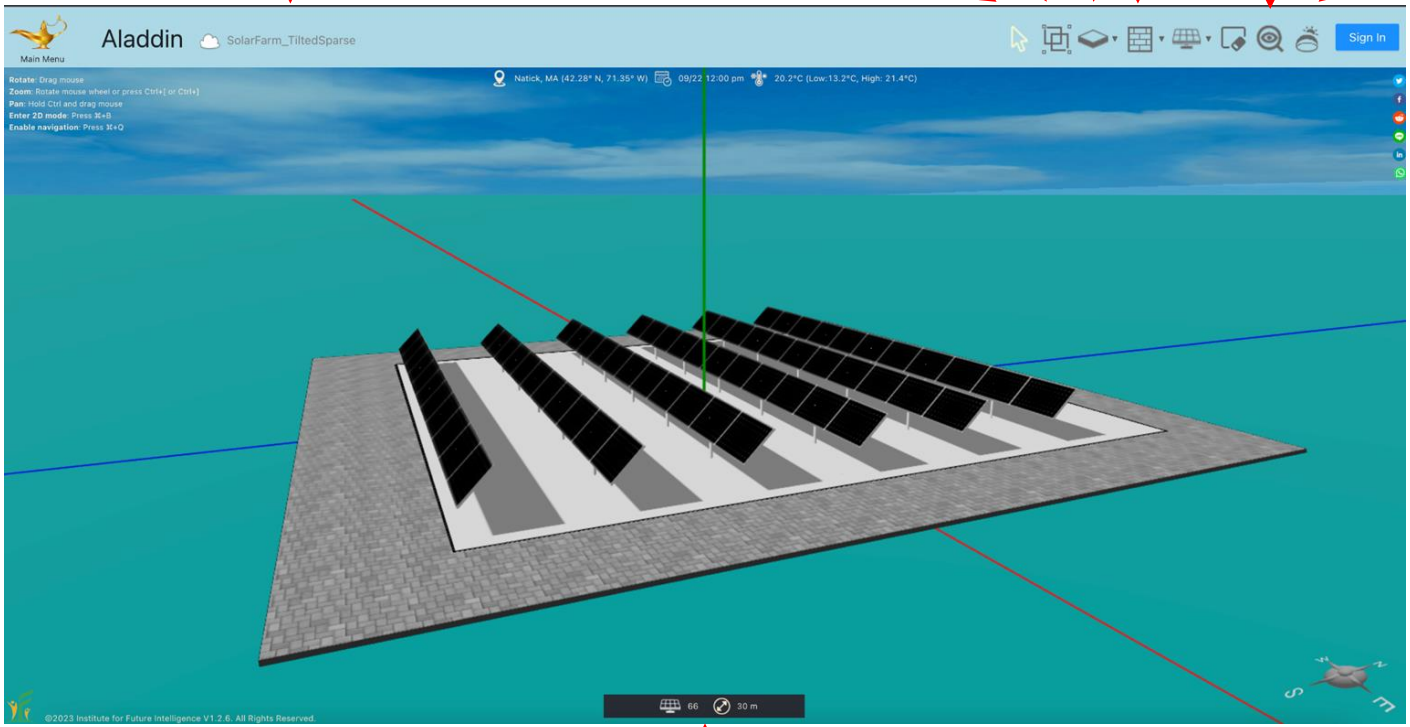
Reference Slides

Sign into Aladdin with your Google account



Finding your Aladdin ID




Add foundation / wall / solar panel
Move / resize a group
Show heatmap
Cloud file name
Select
Sun and time settings
Menu
Sign in
Navigation tips
Design information
Compass
Aladdin
SolarFarm_TiltedSparse
Main Menu
Sign In
Natick, MA (42.28° N, 71.35° W)
09/22 12:00 pm
20.2°C (Low:13.2°C, High: 21.4°C)
Rotate: Drag mouse
Zoom: Rotate mouse wheel or press Ctrl+[or Ctrl+]
Pan: Hold Ctrl and drag mouse
Enter 2D mode: Press ⌘+B
Enable navigation: Press ⌘+Q
66
30 m
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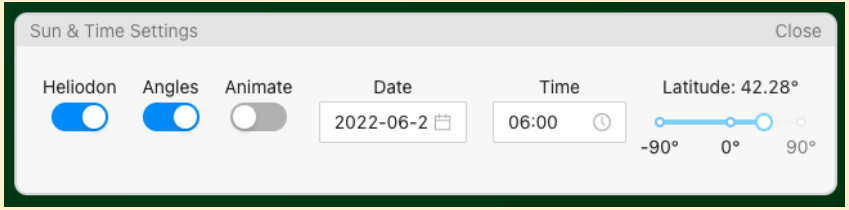
Aladdin Tip #1: Heliodon



To open the ***Sun & Time Settings*** panel, choose the sun icon  in the menu bar.

In *Sun & Time Settings*, you can turn on the ***Heliodon*** to visualize the Sun's position at any given date, time, and location.

You can also turn on ***Animate*** to visualize the Sun's movement throughout the day.

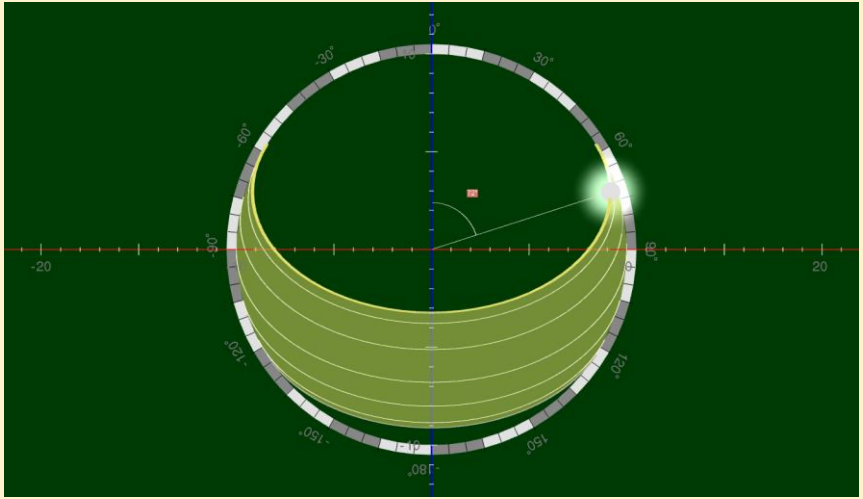
Aladdin Tip #2: Changing the View

Rotate: Drag mouse
Zoom: Rotate mouse wheel or press Ctrl+[or Ctrl+]
Pan: Hold Ctrl and drag mouse
Toggle 2D/3D: Press F2

The top left corner of Aladdin shows how to rotate, zoom, pan, and switch to 2D mode (bird's eye view).

The exact shortcut keys will depend on the operating system of your computer.

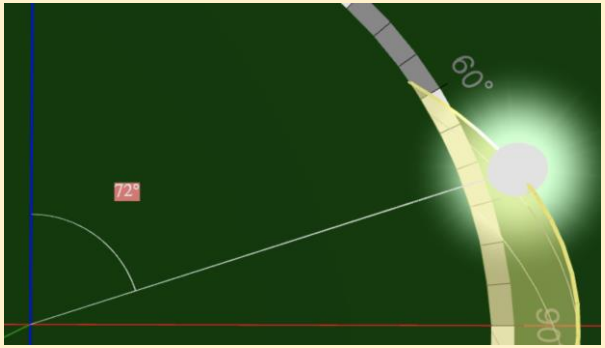
The **2D mode** is easy for finding directions and measuring distances. You will also find it useful for designing solar farms in the future.



Aladdin Tip #3: Axes and Compass

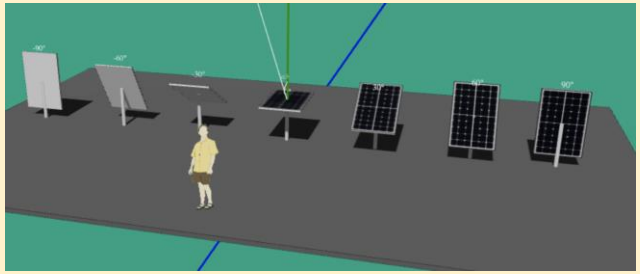
The blue axis shows north and south.

The red axis shows east and west.



The compass shows all four directions.

Aladdin Tip #4: Solar Panel Tilt Angle

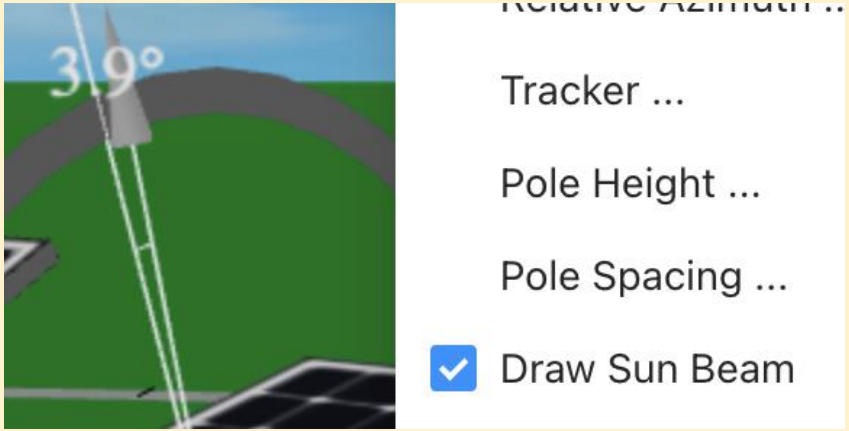


The **tilt angle** changes how the solar panel is oriented in the vertical direction.

There are two ways to change the tilt angle of a solar panel in Aladdin:

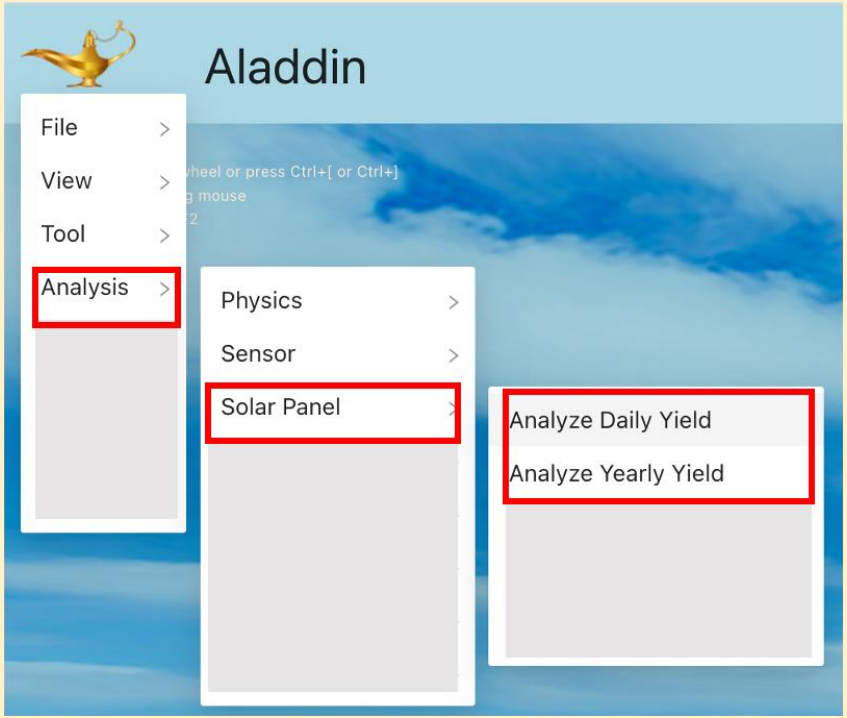
- select the solar panel and drag the arc to change the tilt angle visually;
- right click the solar panel and select “Tilt Angle …” to set it to a precise value.

Aladdin Tip #5: Draw Sunbeam



To draw a sunbeam from the Sun to a solar panel and see the sunbeam angle, **right click** on the solar panel and select “Draw Sun Beam”.

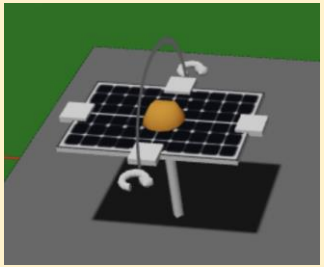
Aladdin Tip #6: Analyze Energy Output



To analyze the energy output of all solar panels, select “Main Menu > Analysis > Solar Panels > Analyze Daily Yield” or “Analyze Yearly Yield”,

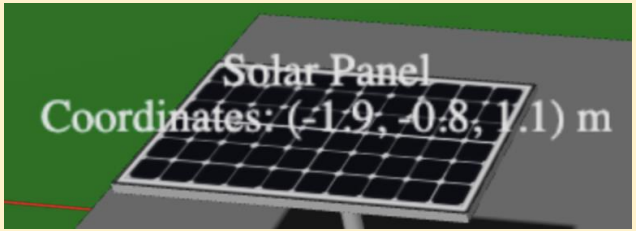
Aladdin Tip #7: Setting the Position of a Solar Panel

Drag the **orange dot** at the center of the panel to move it on a foundation.

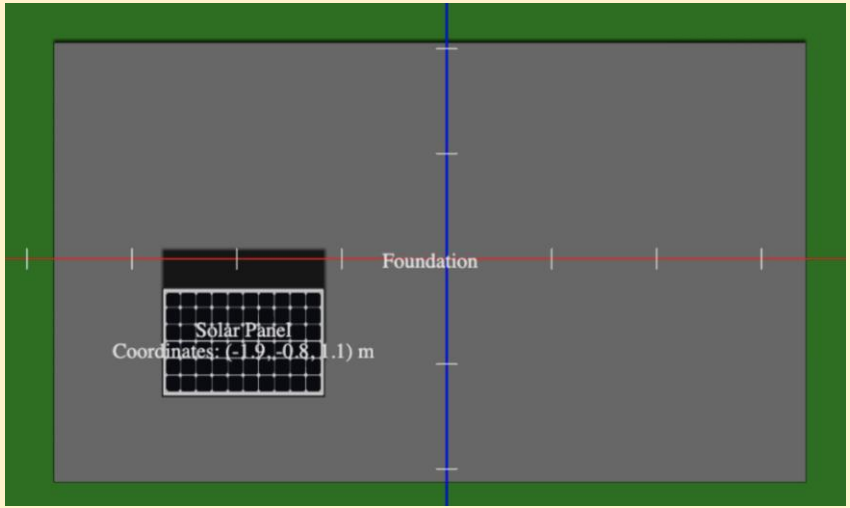


Hover on the panel to see its **coordinates**:

(x, y, height)



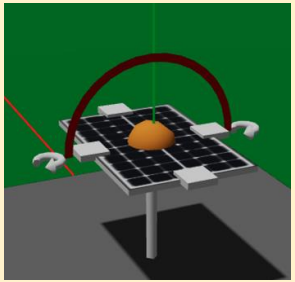
It can be easier to move a solar panel in the **2D mode**.



Aladdin Tip #8: Setting the Angles of a Solar Panel

Tilt angle:

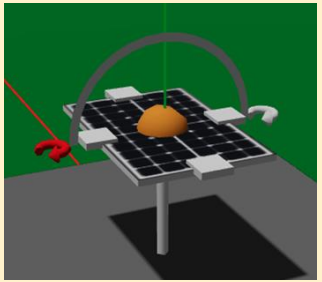
- select the solar panel and **drag the arc**

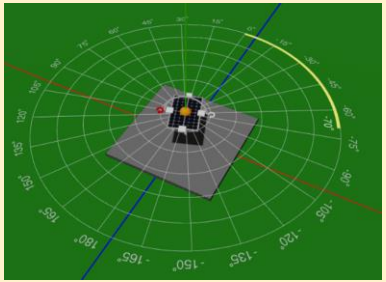


- To set the tilt angle to a specific value, **right click** on the panel and select **“Tilt Angle…”**

Azimuth angle:

- select the solar panel and **drag the curved arrow**

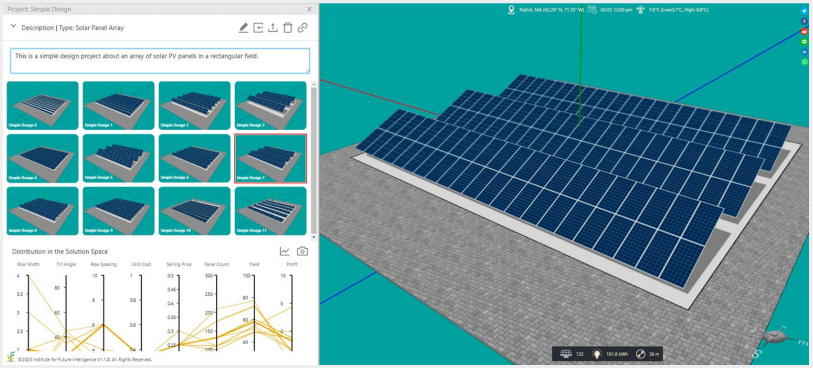




- To set the azimuth angle to a specific value, **right click** on the panel and select **“Relative Azimuth…”**

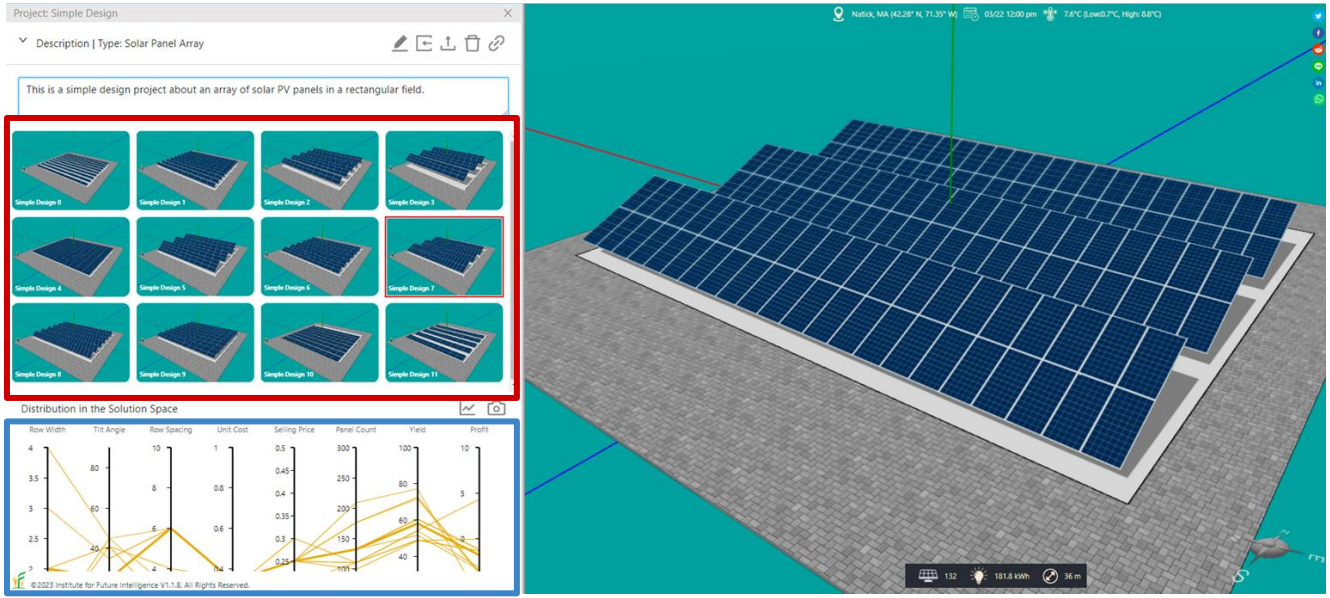
Organize Your Designs with *Projects*

http://intofuture.org/aladdin-generative-design-1.html



Why do I need a *project*?

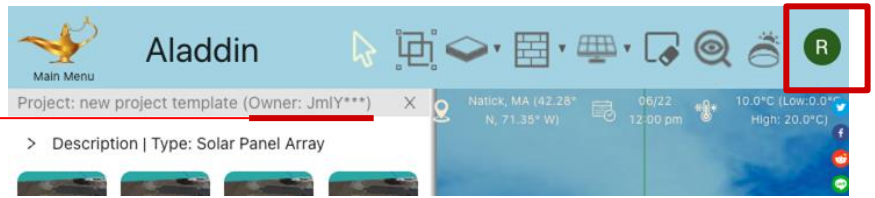
A *project* lets you **view** and **compare** dozens of designs at the same time.



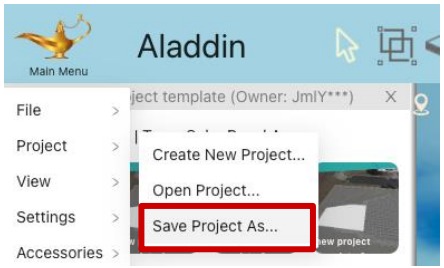
Copy an existing *project* (1 of 2)

1. Open the *project* link (example).
2. Make sure you've logged into your Aladdin account.

This shows this is someone else's project

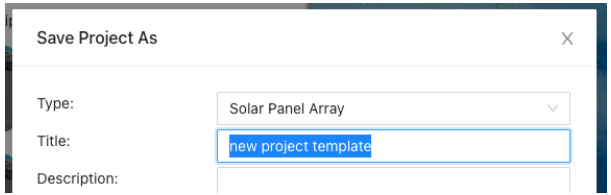


1. Select "Main Menu > Project > Save Project As…"

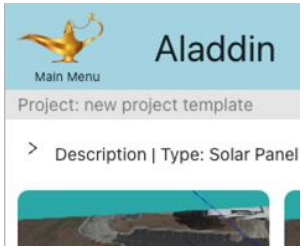


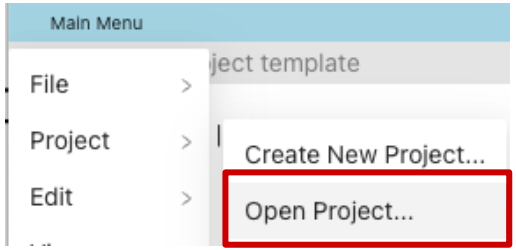
Copy an existing *project* (2 of 2)

4. Fill in the title and description (optional).



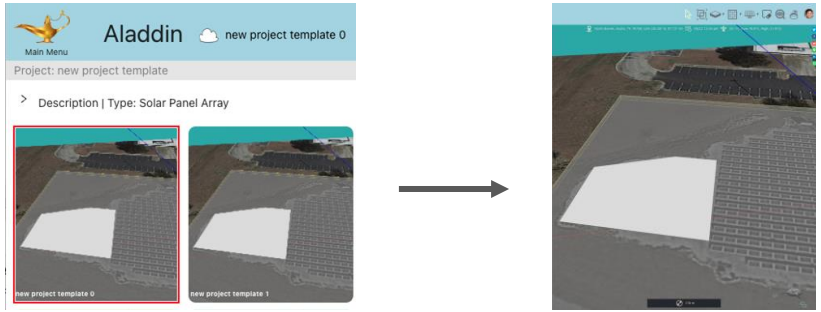
5. You now have your own copy of the *project*, which you can edit and open later.



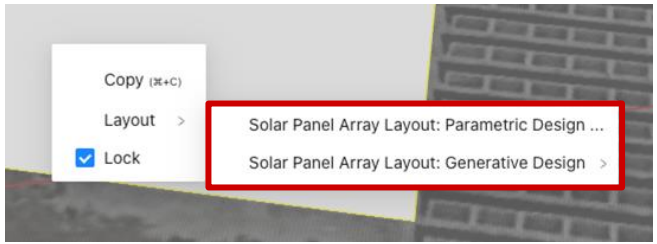


Update a design in a *project* (1 of 2)

1. Double click a design in a *project* to open it.



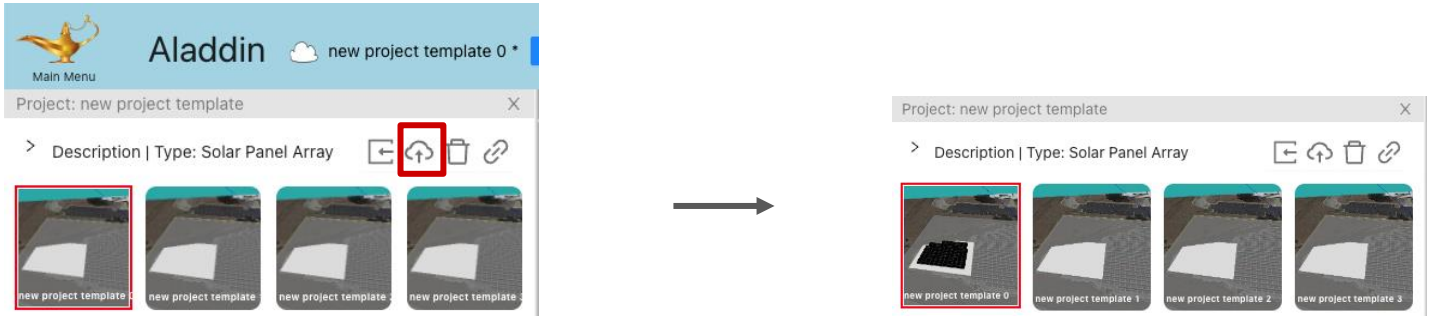
1. Right click on the shaded area to create a design using either PD or GD.



Note: If you create a **PD design,** you need to **analyze its yearly yield** before you update the selected design for it to show up properly in the parallel coordinate plot below.

Update a design in a *project* (2 of 2)

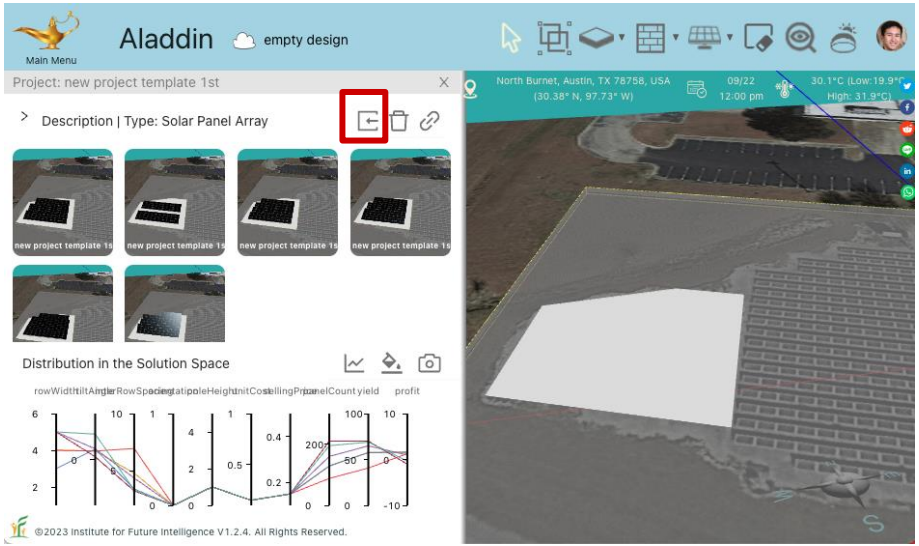
3. Once you finish your design, click “Update selected design”.



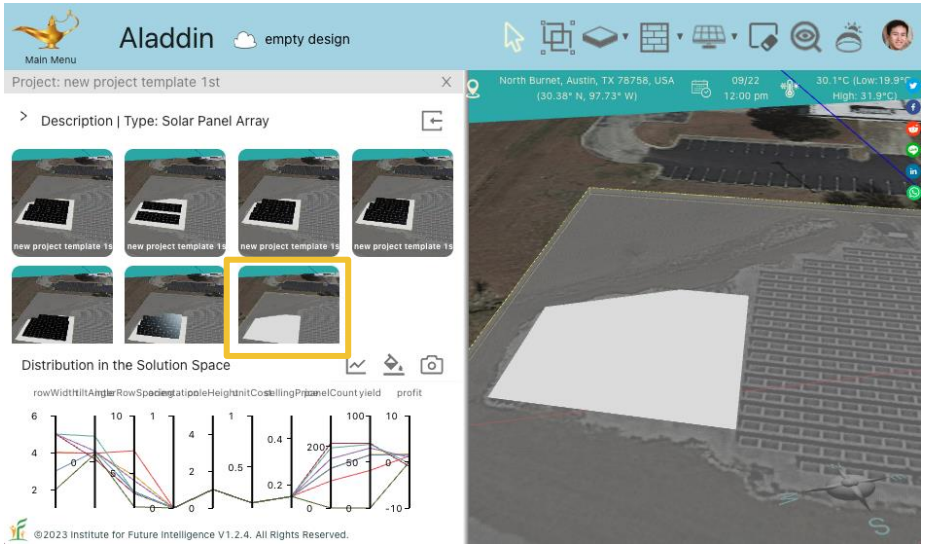
Note: If you create a **PD design,** you need to **analyze its yearly yield** before you update the selected design for it to show up properly in the parallel coordinate plot below.

Add a new design to a *project*

1. When you finish your new design, click “Curate current design”.



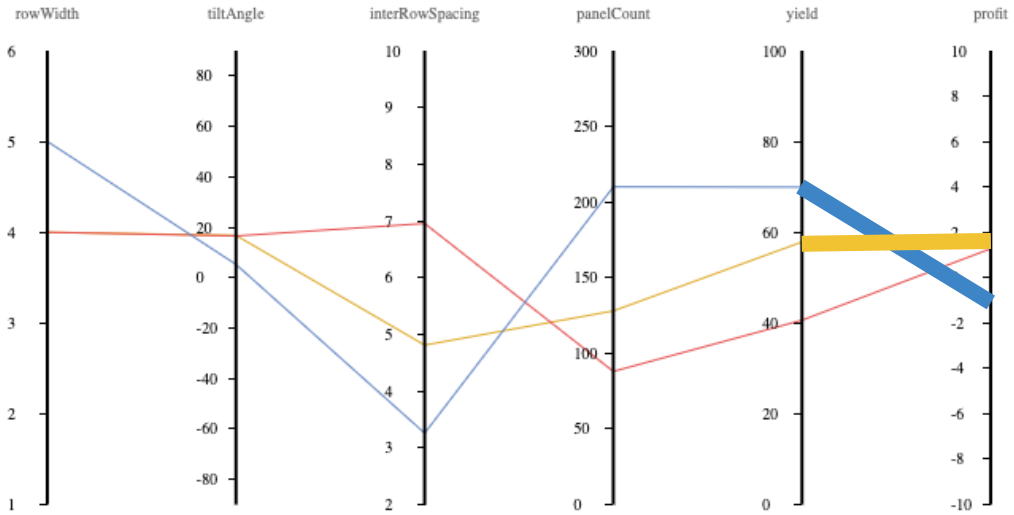
2. A **copy** of your design will now be added to the project. **Note that your original design file is still open - not the new copy!** Double click your new design to edit it.



Non-dominated designs on a parallel coordinate plot

The blue design and yellow design are both non-dominated.

If you look at their yield and profit objectives, they form a **cross (X)** on the PCP.



Dominated designs on a parallel coordinate plot

The red design is dominated by the yellow design.

If you look at their yield and profit objectives, the red line is **entirely below** the yellow line.