

# Future Improvement and functionalities to implement

## 1. In Report tab remove plots when checkbox is unchecked

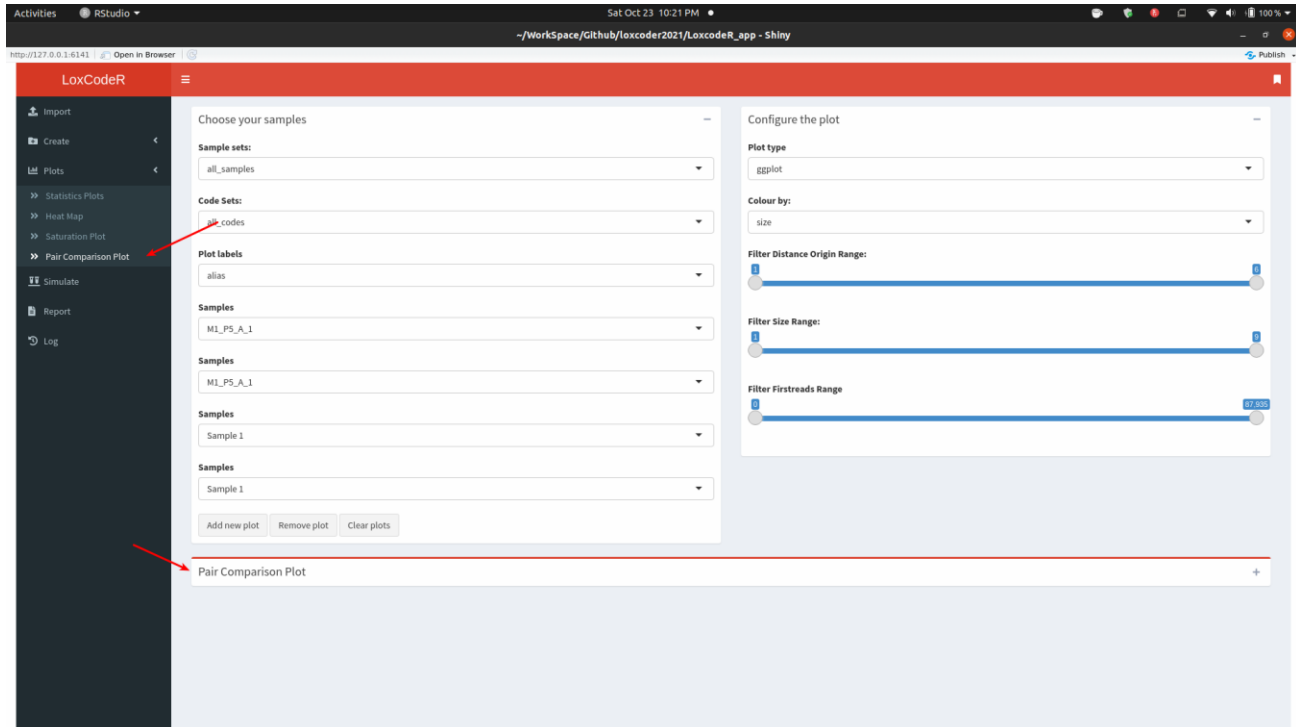
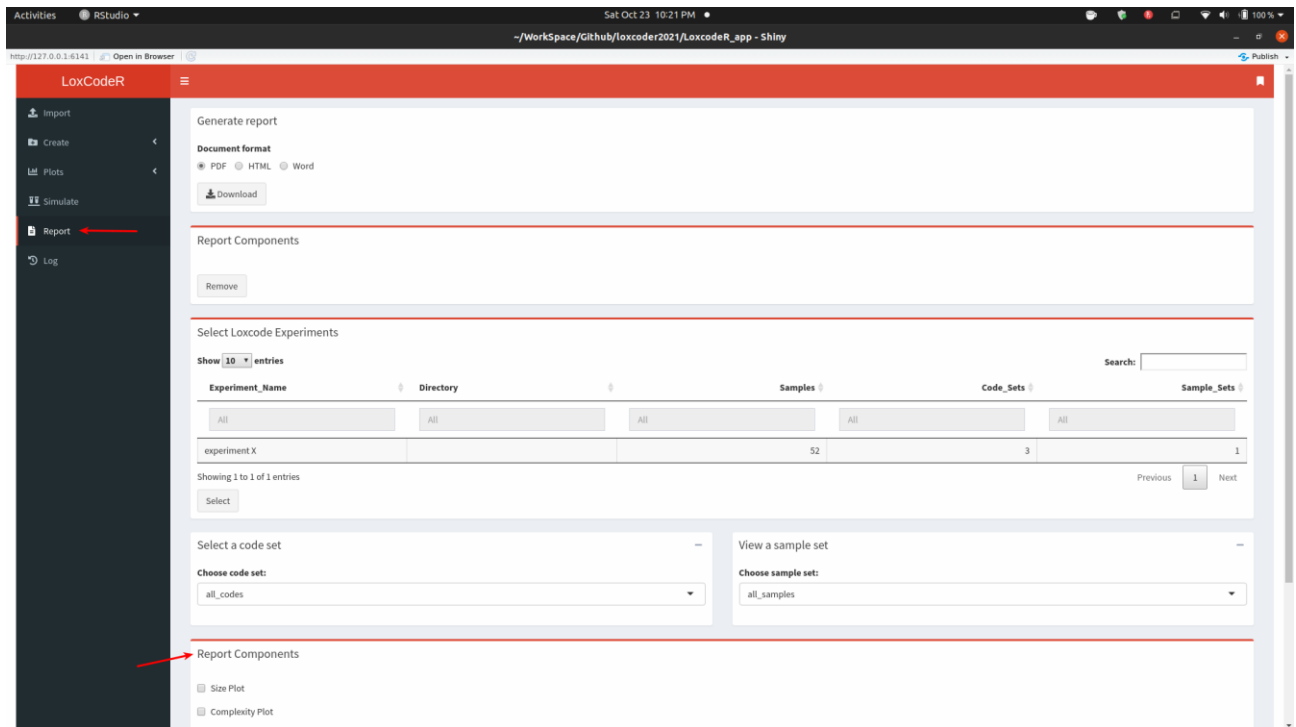
The screenshot displays the RStudio Shiny application interface. The sidebar on the left contains the following tabs: Plots, Simulate, Report, and Log. The 'Report' tab is currently selected. The main content area is divided into several sections:

- Document format:** Includes options for PDF, HTML, and Word, along with a Download button.
- Report Components:** Features a table with columns: ID, Plot\_type, Experiment, and Annotation. The table contains one entry with ID 1, Plot\_type readstats\_plot, Experiment experiment X, and Annotation value. Below the table, it shows 'Showing 1 to 1 of 1 entries' and a Remove button.
- Select Loxcode Experiments:** Features a table with columns: Experiment\_Name, Directory, Samples, Code\_Sets, and Sample\_Sets. The table contains one entry with Experiment\_Name experiment X, Directory All, Samples 52, Code\_Sets 3, and Sample\_Sets 1. Below the table, it shows 'Showing 1 to 1 of 1 entries' and a Select button.
- Select a code set:** Includes a Choose code set dropdown menu with the value all\_codes.
- View a sample set:** Includes a Choose sample set dropdown menu with the value all\_samples.
- Report Components (Bottom):** Includes checkboxes for Size Plot (checked) and Complexity Plot (unchecked).

Red arrows in the image point to the 'Report' tab in the sidebar and the 'Report Components' section at the bottom of the main content area.

Remove the plots from report on unchecking the checkbox. Or have some other selection method like buttons. This is under report tab -> report components.

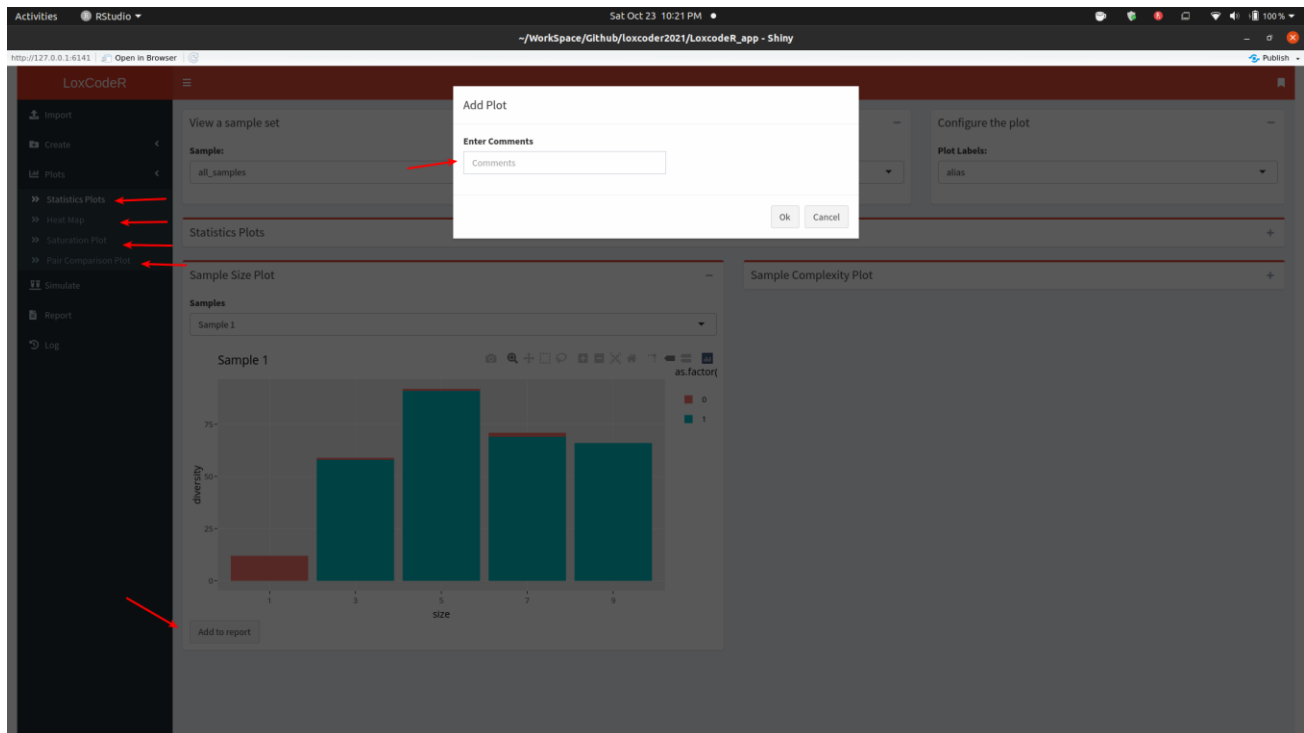
## 2. Work around to plot pair plot and also an option to add it to report



Currently the pair plot does not show up. On closing the app, we can see some plots plotted in the viewer. Need a way to plot in the app. Probably can be done by reducing the number of parameters

being passed to the pair plot. Along with this a way to add this graph to report needs to be looked at. There has to be a way to select which plots from the whole set needs to be included in the report.

### 3. Take input in the popup which comes up when we add plot to report from individual plot page.



When adding the plots from their individual page, a pop comes up. It has option for us to add some meta data. A way to store this text data and include it in report needs to be implemented.

### 4. Integrate Hierarchy prediction model into loxocoder app

Python implementation of the model can be found under loxocoder/Network Inference. File name is Hierarchy predictor.ipynb. There are 2 different implementations. One with random forest and one with neural net. Depending on the size of data we can use the 2 models.

For prediction we can split a single test data into sets of 50. We can then make prediction on these sets. We can then select the hierarchy based on highest probability or majority voting.

This has to be integrated with the loxocoder app. This can be done by creating a flask API for the model and this API can be called from the app.

### 5. Add code set and sample set to the report

A compact way to add code set and sample set to the report needs to be implemented. Putting the whole code set would take up a lot of space in the report and wouldn't be understandable.