Once a job has been submitted to MetagenoNets, user is taken to a personal dashboard. Each dashboard is tagged to a trackable Dashboard ID, which is displayed on the top.

**There are 4 analytical and visualization modules in MetagenoNets:**
1. Categorical Network Analysis
2. Integrated (multi-omic) Network Analysis
3. Network Composition Analysis
4. Network Property Analysis

**Info tags**
Access the (i) tags at various sections of the modules to get assistive information.

**Multi-modular**
Use this menu panel for accessing multiple analysis and visualization Modules in the personal dashboard.

**Module specific guides**
A step-by-step process guide is provided in each module (for executing a task), along-with basic plot-guides.

**Dynamic data management**
- Use this floating button to access various filtration, normalization and transformation methods
- This option may be used multiple times, at any point in time.

All plots generated in MetagenoNets are downloadable as Hi-Res images.
MetagenoNets creates group level networks for each category (also called Environment) in the supplied meta-data. For example, for Geography environment, categorical groups can be India, US, Japan, Europe etc. MetagenoNets automatically infers all possible categorical groups in the meta-data and provides options to perform network analysis on each of such groups.

**MODULE1: CATEGORICAL NETWORKS**

Once a choice for a category is updated, the network corresponding to that is inferred using the parameters specified and visualized in the viewport.

**Network Diagram**

End-user can view network diagrams in an independent window dedicated to the plot, along with customization options.

**Status terminal**

Status terminal helps get information about task outcomes.

**Node meta-data**

Dropdown option to overlay Node meta-data.

**Global Properties**

Tabulated summary of the key global properties of the network being analysed.

**Customizations**

- Layouts
- Property mapping
- Node and Font sizes

**Download Options**

- Plot Downloads
- Cytoscape and Gephi compatible files
- Edgelist
- Abundance Data
Categorical Networks

Comprehensive analysis and visualization of all Categorical networks identified through metadata.

Network inference algorithms

Various popular algorithms are provided for dynamic inference and comparisons.

Update Parameters

Use this option to propagate the chosen options across all the modules of MetagenoNets. If not clicked, the chosen parameters will be applicable only for the current module.

Edge filtration parameters

Various relevant parameters like p-value, Iterations, r-value may be changed dynamically.
**Integrated Networks** are created for a categorical group by combining continuous groups/ features having continuous values from Primary Metadata and/ or Secondary Input data to create a complex or inter-omic view of the microbiome associations. User can also change the layouts and reset the node sizes as required.

**Integrative Networks**

**Categorical Networks**

**Integrated Networks**

**Venn Diagrams**

**Bi-partite plots**

Edges exclusively between the inter-omic data and continuous metadata groups can be visualized through highly intuitive Bi-partite plots.

**Continous Metadata**

Integrate continuous meta-data with primary data for finding correlating taxa against Continuous factors.

**Searchable inter-omic data**

Search and specify inter-omic features of interest for integrating into network inference.

**Inter-omic options**

Switch between Complete and Bi-partite Integrated inter-omic networks.
This module allows group level comparisons for each environment in the MetaData, in terms of **Node and Edge compositions** of various networks in the environmental category. This is enabled through interactive Venn diagrams for node and edge composition of all networks in a chosen Environment. This visualisation may take some time to load. Please be patient.
This module of MetagenoNets allows computation and analysis of network properties (centrality measures) for each of the network in an environment using selected algorithm and associated parameters. There are two methods of analysis and visualization available:

1. Tabulated view (sortable, searchable and exportable tables)
2. Grouped Boxplots of properties for all networks in an environment, thereby enabling comparison.

Network Properties
Interactive, searchable and exportable network property tables for each group of an environment

Network Properties Box Plots
Interactive, downloadable, trend enabled, boxplots (and variants) for each network property, for each group of an environment

Graph type and trend lines
Use the buttons to change graph type
Or overlay trend-lines for better comparison.
Download option available as well.