Dash on Cannon

1. Go to compute node:
   salloc -p test --mem-per-cpu 4g -t 0-02:00 -c 16

2. Go to your working directory:
   cd /n/holyscratch01/rc_admin/Users/mjoshi

3. Load the default Python module:
   module load python

4. Create a base conda environment at a desired location using the - - prefix option. In this case, provide the absolute path to the location where you would like the environment to be stored. This would also be used as the name of the conda environment:

   conda create --prefix=/n/holyscratch01/rc_admin/Users/mjoshi/dash_test python=3.11 -y

5. Activate the conda environment using the absolute path of the environment:
   source activate /n/holyscratch01/rc_admin/Users/mjoshi/dash_test

6. Install few data science packages:
   conda install jupyter numpy matplotlib pandas scikit-learn scipy -y

7. Install Dash: pip install dash

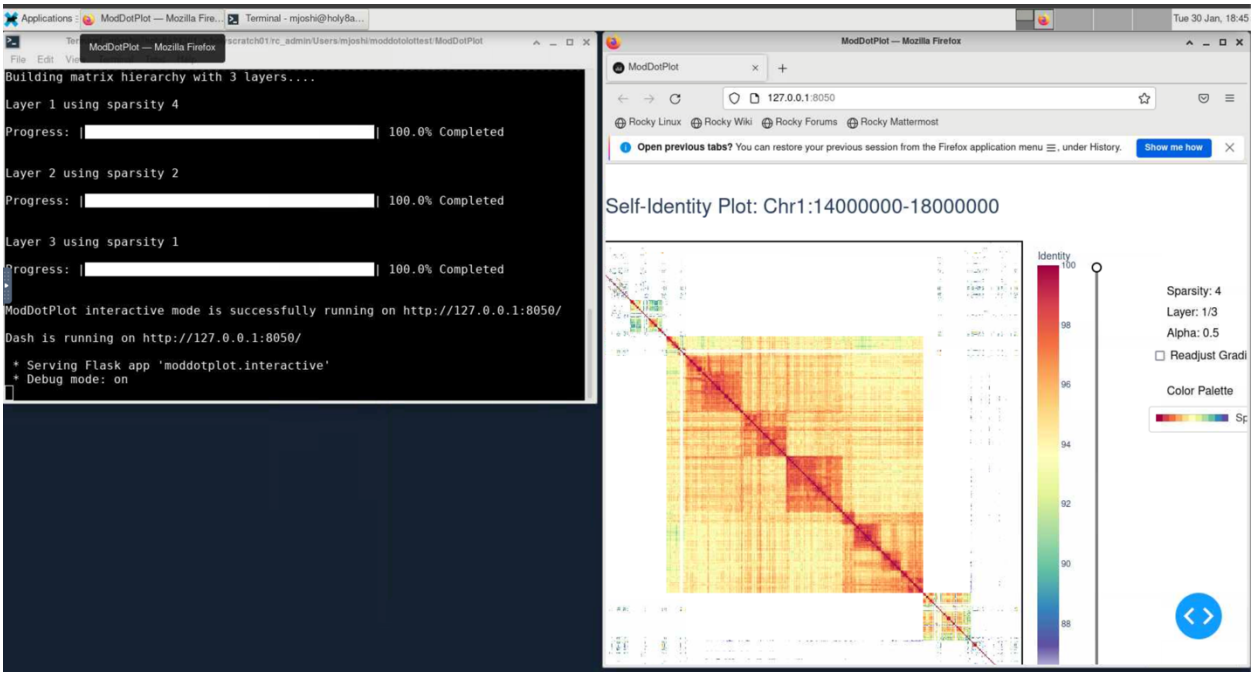
8. Install ModDotPlot based on https://github.com/marbl/ModDotPlot?tab=readme-ov-file#installation
   git clone https://github.com/marbl/ModDotPlot.git
   cd ModDotPlot/
   python setup.py install

   Using /n/holyscratch01/rc_admin/Users/mjoshi/dash_test/lib/python3.11/site-packages
   Finished processing dependencies for moddotplot==0.7.2

9. Launch Remote Desktop on VDI:
   https://rcood.rc.fas.harvard.edu/pun/sys/dashboard/batch_connect/sys/RemoteDesktop/session_contexts/new

10. Open the terminal
11. Go to the directory where ModDotPlot is installed
12. Repeat steps #3 & 5
13. Execute test – Interactive Mode
    moddotplot -i test/Chr1_cen.fa

Right click on http://127.0.0.1:8050/ and choose “Open link”
This would open the Firefox browser with the corresponding plot as shown below.



14. Execute test – Comparing two sequences.
moddotplot -i test/chr14_segment.fa test/chr21_segment.fa --compare-only -s 4

Right click on http://127.0.0.1:8050/ and choose “Open link”
This would open the Firefox browser with the corresponding plot as shown below