**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*

1. Launch Remote Desktop on VDI: <https://rcood.rc.fas.harvard.edu/pun/sys/dashboard/batch_connect/sys/RemoteDesktop/session_contexts/new>
2. Open the terminal
3. Go to the directory where ModDotPlot is installed
4. Repeat steps #3 & 5
5. 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.  
     
   A screenshot of a computer

   Description automatically generated
6. 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  
   A screenshot of a computer

   Description automatically generated