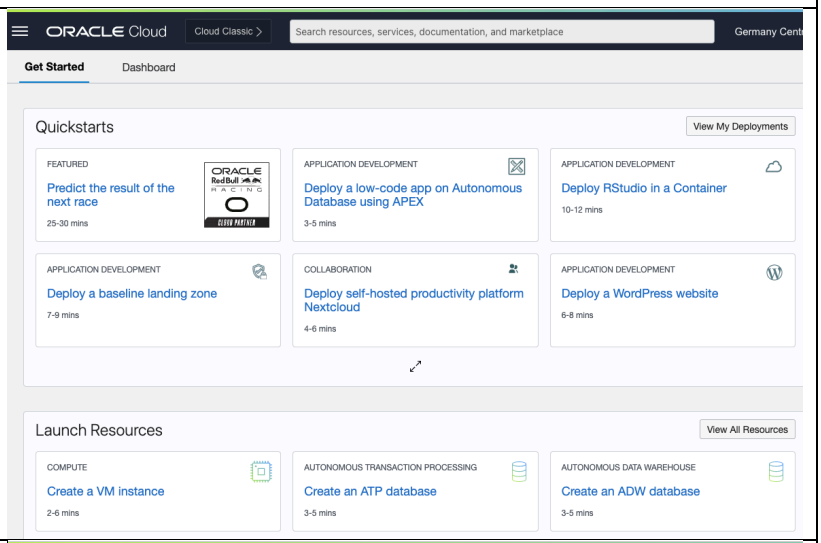
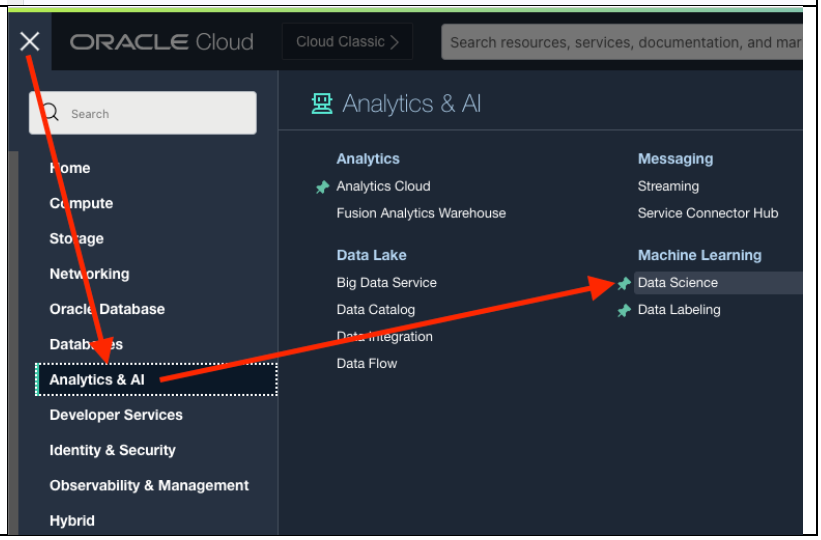
Install R Conda Environment within OCI Data Science

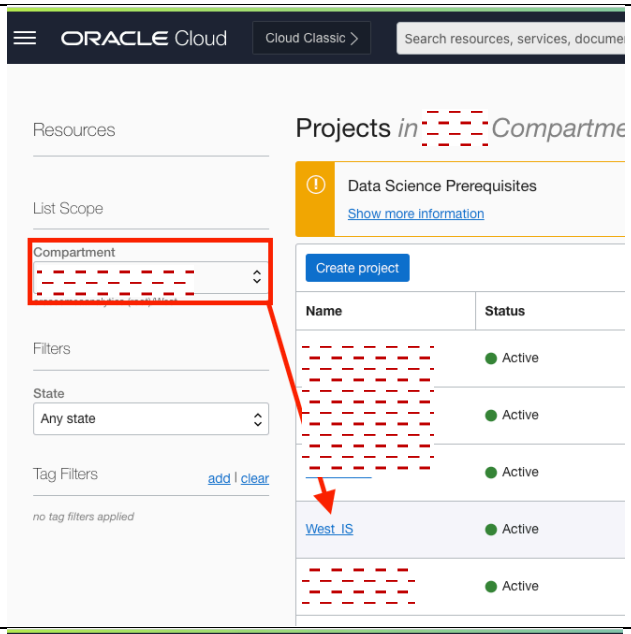
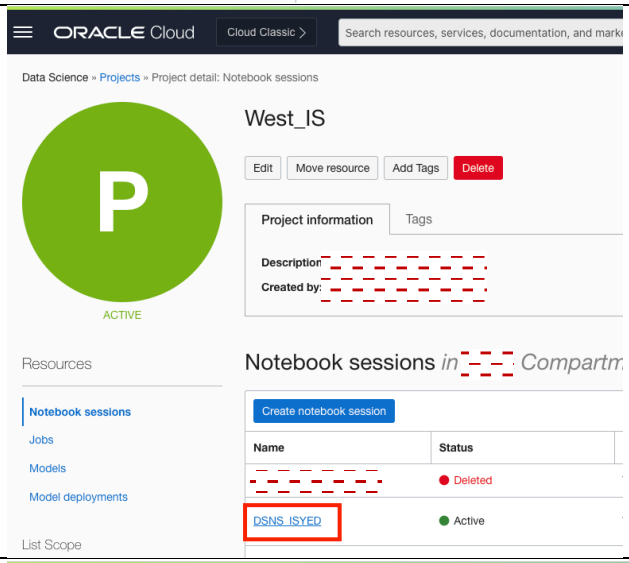
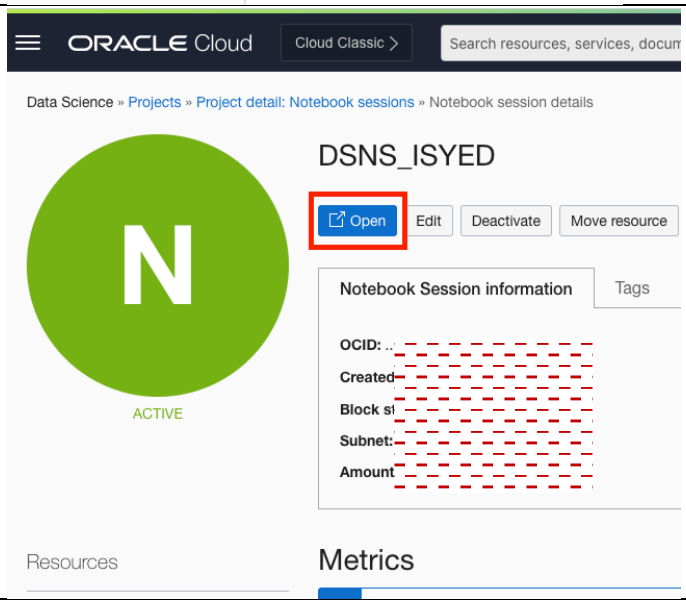
PLEASE NOTE – This is not supported and is a workaround to enable an R conda environment within OCI Data Science.

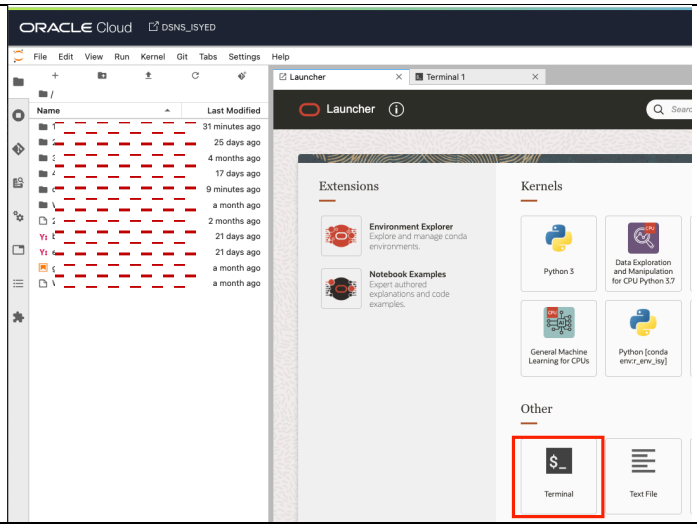
This documentation will take you through how to install an R Conda Package within OCI Data Science Service, install additional R packages and create a Jupyter Notebook based on the R Kernel.

Documentation References:

- https://docs.anaconda.com/anaconda/user-guide/tasks/using-r-language/
- https://docs.conda.io/projects/conda/en/latest/commands/install.html
- https://repo.anaconda.com/pkgs/r/

Step	Screenshot
Login to your Oracle Cloud Console via: ***cloud.oracle.com***	
Navigate to your OCI Data Science Projects: ***Menu > Analytics & AI > Data Science.***	

Select your Compartment and then your Data Science Project.	
Open your desired Notebook Session.	
Click ***'Open'*** to launch your Notebook Session. If prompted with your Cloud Account Name – Click ***'Continue'***. If prompted to sign in – Click ***'Continue'***.	

From your Launcher Home Page – Click ***'Terminal'***.	
We can use the following command to list our existing conda environments. ***conda info --envs***	[redacted]$ conda info --envs # conda environments: # /home/datascience/conda/dataexpl_p37_cpu_v3 /home/datascience/conda/generalml_p37_cpu_v1 /home/datascience/conda/isy-base-p37-condav1_0 /home/datascience/conda/mlcpuv1 base * /opt/conda [redacted]
We can create a new R Conda Environment using the following command: ***conda create -p /home/datascience/conda/r_env_isy r-essentials r-base*** Where ***-p*** determines the location of the Conda Environment and ***r-essentials*** and ***r-base*** are the packages to install. This might take a minute or two to start installing packages. When prompted to ***'Proceed'*** enter ***y***.	[redacted]$ conda create -p /home/datascience/conda/r_env_isy r-essentials r-base Collecting package metadata (current_repodata.json): done Solving environment: failed with repodata from current_repodata.json, will retry with next repodata source. Collecting package metadata (repodata.json): done Solving environment: done ## Package Plan ## environment location: /home/datascience/conda/r_env_isy added / updated specs: - r-base - r-essentials The following NEW packages will be INSTALLED: _libgcc_mutex pkgs/main/linux-64::_libgcc_mutex-0.1-main _openmp_mutex pkgs/main/linux-64::_openmp_mutex-4.5-1_gnu _r-mutex pkgs/r/linux-64::_r-mutex-1.0.0-anacondar_1 Proceed ([y]/n)? y Preparing transaction: done Verifying transaction: done Executing transaction: done # # To activate this environment, use # # $ conda activate /home/datascience/conda/r_env_isy # # To deactivate an active environment, use # # $ conda deactivate (base) bash-4.2$

As you can see in our conda install directory we see a new Conda Environment present.

We can activate the Conda using:

conda activate /home/datascience/conda/r_env_isy

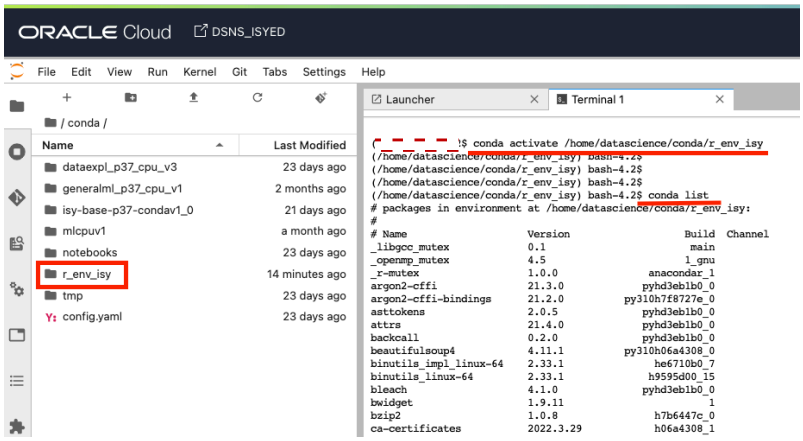
where we point to the installation directory of the Conda.

We can now list all the R packages installed by using:

conda list

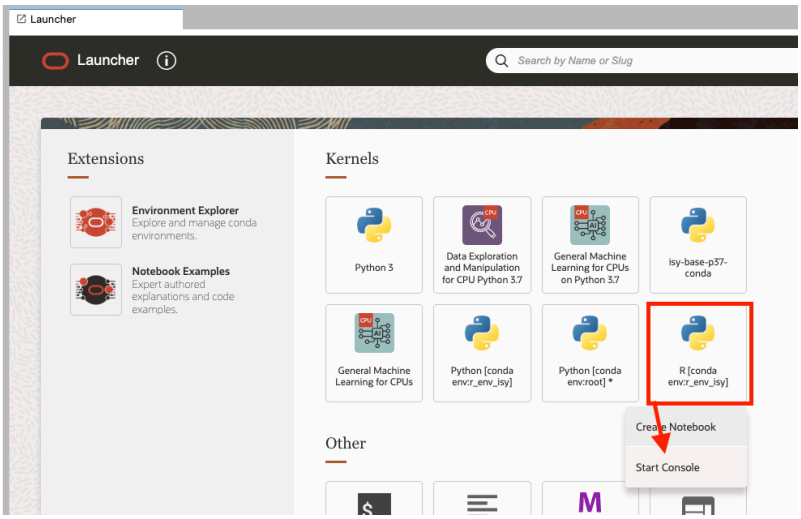
We can now exit the Terminal:

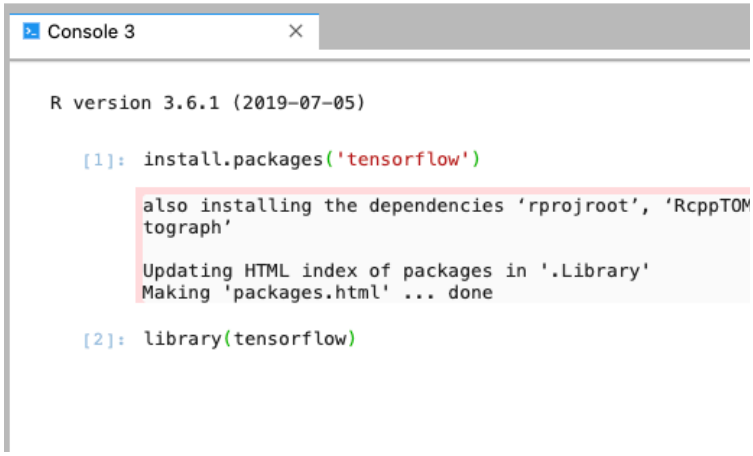
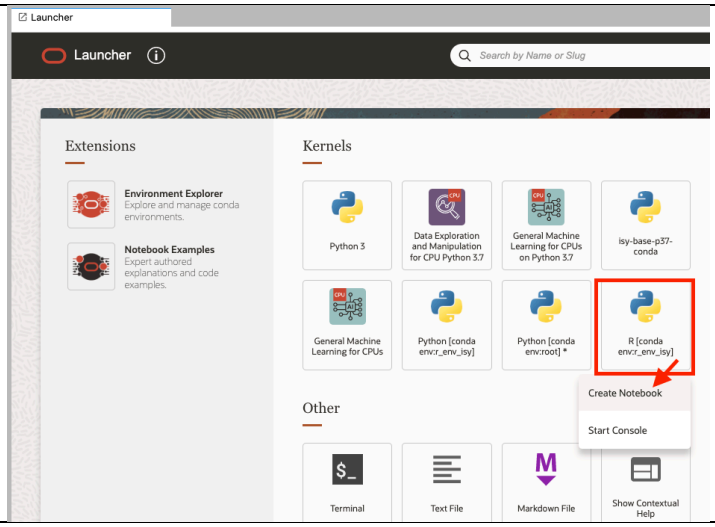
exit

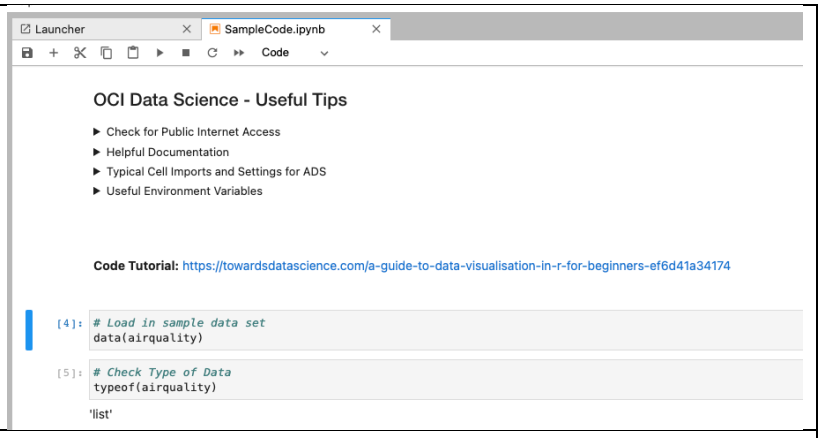


From the Launcher we can now see the new R Kernel based on the installed Conda Environment.

Click on it and Select ***'Start Console'.***



Within the R console we can see the Version of R Displayed at the top ***(R Version 3.6.1)*** We can start installing additional packages using install.packages('<name>') Here I installed tensorflow: ***install.packages('tensorflow')*** We can then check it is installed by trying to load in the library: ***library(tensoflow)*** Once installed we can close the console.	
Next, we can create a Jupyter Notebook. From the Launcher select the ***'R Kernel'*** and then ***'Create Notebook'***.	

Let's start writing sample code to load in some sample data and perform data manipulation.	
See to the right the sample code used in the notebook.	***Code Tutorial:*** https://towardsdatascience.com/a-guide-to-data-visualisation-in-r-for-beginners-ef6d41a34174
See to the right the output of the sample code.