Documentation on how to Set-up the & experimenting with the HanoiWorld experiment

Pre-requisite:

- Know how to obtain the CometML API
- Know how to run the kaggle notebook

Materials:

- The Kaggle Notebook (public - the HanoiWorld train on 5000-Steps)

  HanoiWorld-Roundabout

  HanoiWorld-Merge

  HanoiWorld-Highway

- The model JEPA-Model pre-trained checkpoint link

  The JEPA-Encoder Checkpoint Model Checkpoint - We only consider jepa1_final.pt as the encoder being used

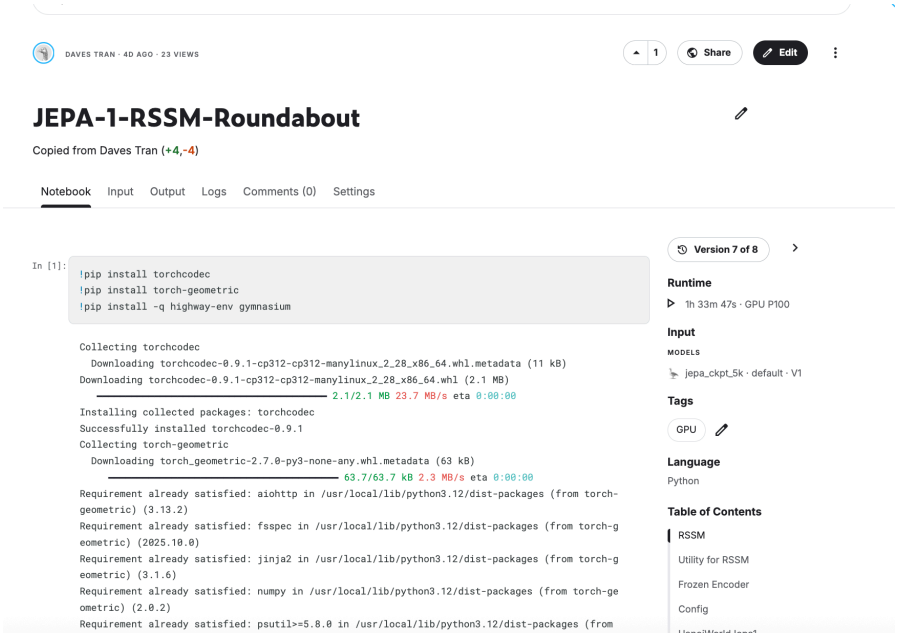
- The HanoiWorld Model Checkpoint: (note usually if you load & open the notebook the model shall come with the notebook as the embedded before)
  - For the highway-v0 use case: https://www.kaggle.com/models/davestran/jepa-1-highway-env/PyTorch/default/1
  - For the roundabout-v0 use case: https://www.kaggle.com/models/davestran/jepa-1-roundabout-5k/PyTorch/default/1
  - For the merge-v0 use case: https://www.kaggle.com/models/davestran/jepa-merge-5k/PyTorch/default/1

How to run the & reproduce the experiment

→ These experiments are identical on all merge, highway, and roundabout

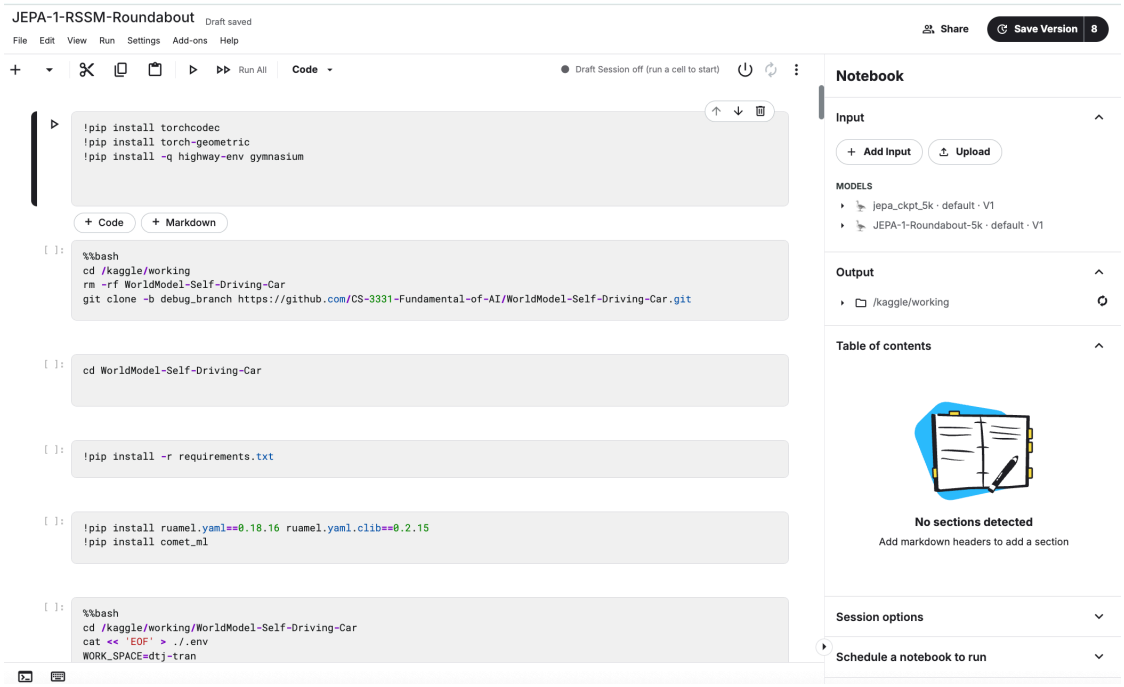
⇒ In this instruction, we shall introduce how you can run the experiment based on our checkpoint

- Step 1: Navigate toward the kaggle notebook with the corresponding environment - which explicitly named on the notebook link (in the 1th bulletpoint of the Material Section)

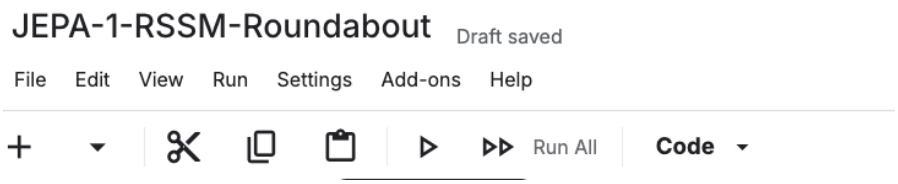


- You shall expect to see the Notebook that you currently chosen which named as follow: JEPA-1-RSSM-[Environment name]

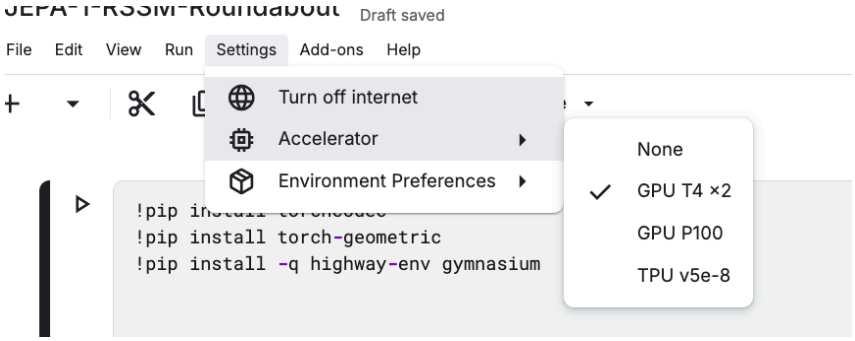
- Step 2: Take the latest version by click on the button (Version x of y)
  - With y is the latest version & x is the current success running version of the original author been run
  - After that - click -edit (the black-button with pen icon on the top-right of the browser for enter)



    - You shall be expect to see this result - a jupyter notebook show you been successfully access to the working enviroment
- Step 3:
    - On the top-bar include the notebook name choose `Setting`

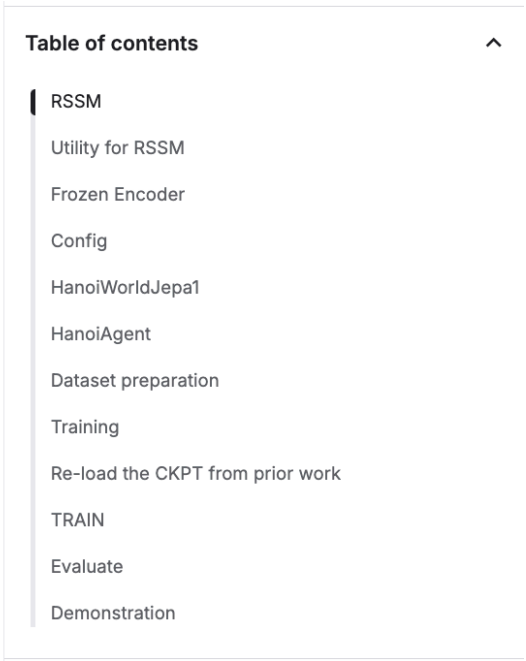


    - Pick Accelerator (GPU selecting)



    - In order to use the Kaggle virtual GPU - you essentially need the already verified account by using phone number `(for this problem please check the setting section of your kaggle account console)`
- Step 4: To activate the experiment click the switch-on button

    - you expect to observe this banner on your working notebook & the spot shall change to Green when the Accelerator & Dataset downloading are ready to be work with
- Step 5: Check the `Table of contents` of the resource



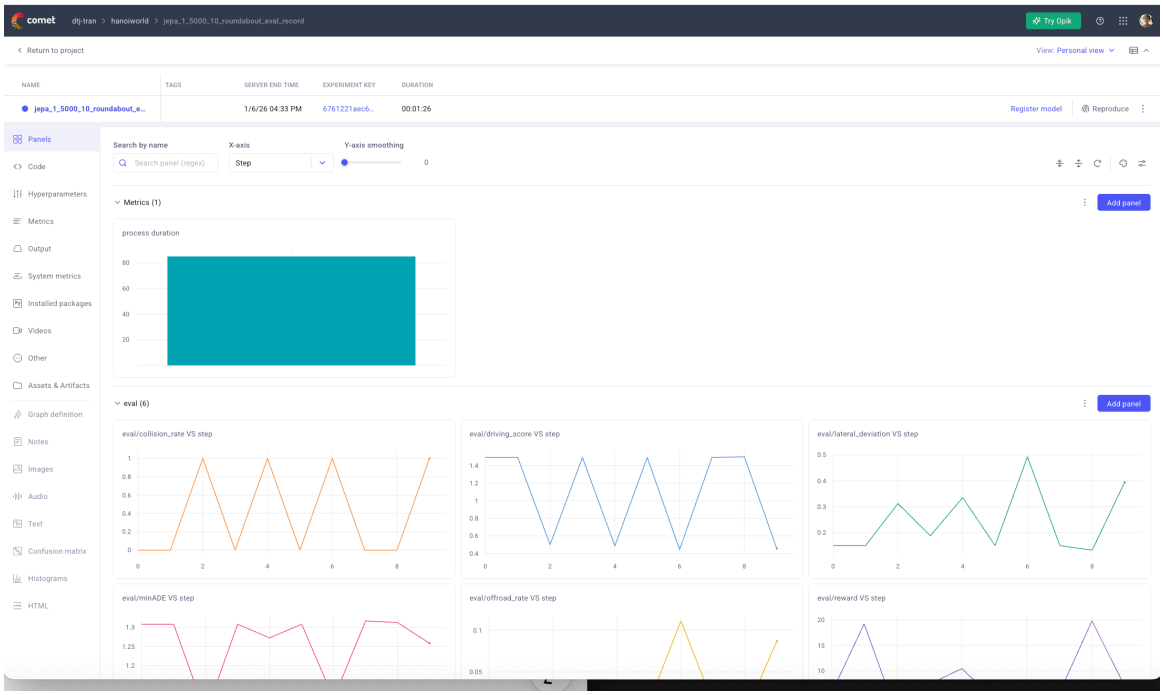
- From top to bottom is the section including the Setting-up , RSSM code-base & Encoder, Config setup, Agent & World Model logic, Training & Evaluation section
- For working Properly - you shall only need to activate all-block from the start to the section `Re-load the CKPT from prior work` for updating the code & pre-loaded function
  - For demonstration of our model - You additionally activate the “Demonstration” section
  - For the Re-trained - Activate the “TRAIN” section additionally
  - For the Evaluate (without no video recording) - use Evaluate section

- Step 4: Running the Demonstration Code blocks
  - Pre-requisite - You have to run All the method block in the Training finish & success without failure

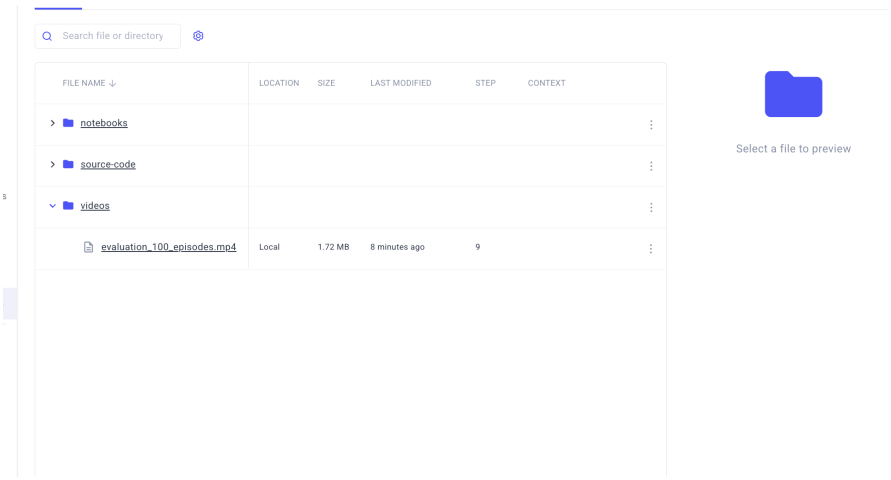
- Step 5:
  - Check on the Comet-ML by navigate in that yeild as below

```
COMET WARNING: To get all data logged automatically, import comet_ml before the following modules: sklearn, keras, to
rch, tensorflow, tensorboard.
COMET WARNING: As you are running in a Jupyter environment, you will need to call `experiment.end()` when finished to
ensure all metrics and code are logged before exiting.
COMET INFO: Experiment is live on comet.com https://www.comet.com/dtj-tran/hanoiworld/6761221aec6d4a38aa65bcee65ec562
9
```

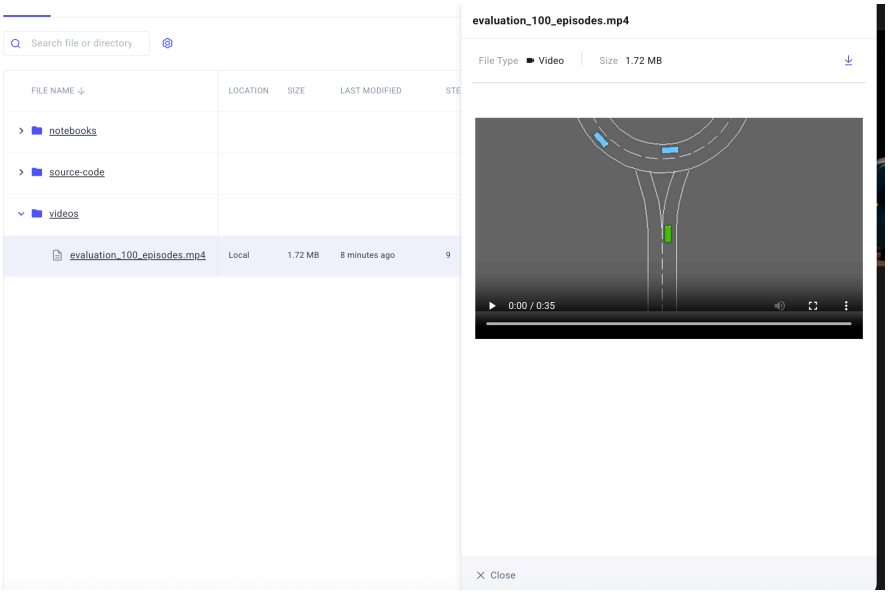
⇒ The https link is the Place where you shall got & observe the experiment & collect the result as the below figure



- Step 6: In the Section on the side-columns pick `"Asset & Artifacts"`
  - Choose `video` folder



- Click on the .mp4 which is the evaluation video for you to debug & what the model performance



- You shall be expected the work like this

Hope you guys work effectively with this instruction!