

PolyVerif User Guide

Follow the below steps to use PolyVerif Framework

In order to configure and run the PolyVerif Pipelines, please clone PolyVerif workspace in home dir using below link.

[git clone --branch PolyVerif-AWSIM --single-branch https://github.com/MaheshM99/PolyVerif.git](https://github.com/MaheshM99/PolyVerif.git)

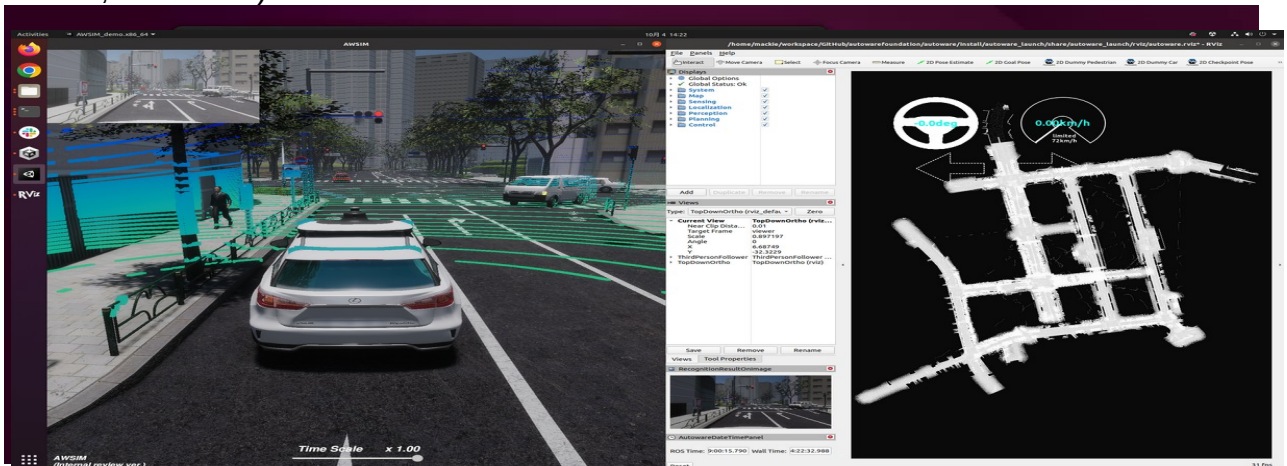
Once PolyVerif directory created then clone AWSIM binary in PolyVerif dir using below link.

https://drive.google.com/drive/folders/1a1kA9CD30_pXpm-4AeEP2s2z4QrhCqxJ?usp=drive_link

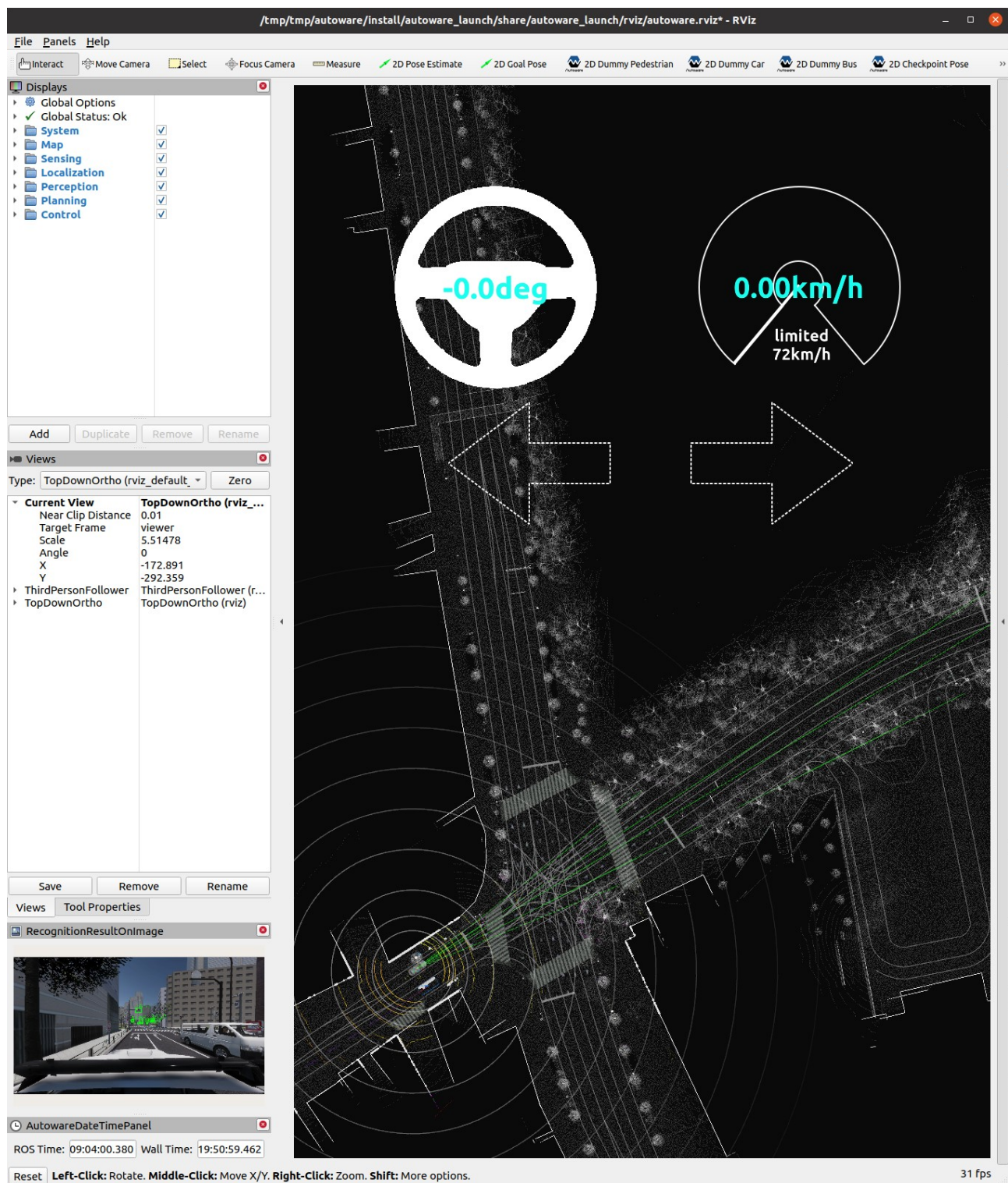
1. Open a new terminal, change dir to PolyVerif and launch AWSIM and autoware using below cmd's

```
$ cd PolyVerif
$ ./launch
```

2. Wait for while to launch awsims and autoware, once launched you can observe all necessary component get initialized in both simulator and rviz (map, ego, ego position, sensor etc).



3.The Autoware will automatically set it's pose estimation as presented below.



If ego position not initializing properly then you can set ego position using **2D pose estimate** button and drag arrow on map.

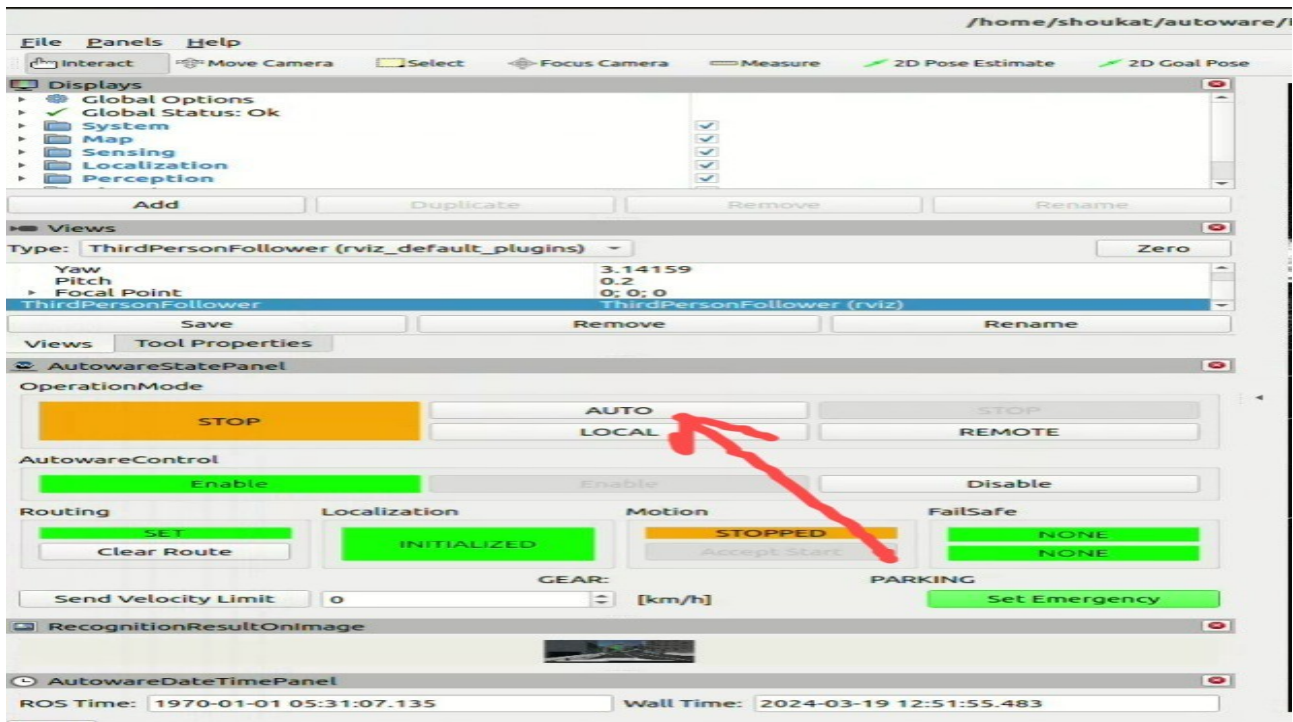
4. Open a new terminal change PolyVerif dir and start detection node using below cmd.

\$ cd PolyVerif

```
$ ./nodeStartDetection.sh
```

[illegible]

5. Once DetectionNode started then start scenario by clicking on button **AUTO** on AutowareStatePanel and scenario get started.



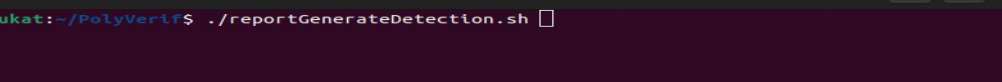
Let complete the scenario as shown below images



6. Once execution of scenario get complete then stop detection node by executing stopNode script in new terminal as shown below.

The image displays two side-by-side terminal windows. The left window, titled 'shoukat@Shoukat: ~/PolyVerif', shows the execution of './nodeStartDetection.sh'. The output includes 'Detection node Started...', the directory path '/home/shoukat/PolyVerif/PolyReports/04_04_2024_11_20_27', the current directory 'CurrDir: /home/shoukat/PolyVerif', and a series of 15 'Detection Node Running.....' messages. The right window, also titled 'shoukat@Shoukat: ~/PolyVerif', shows the execution of './stopNode.sh' with a single cursor prompt following the command.

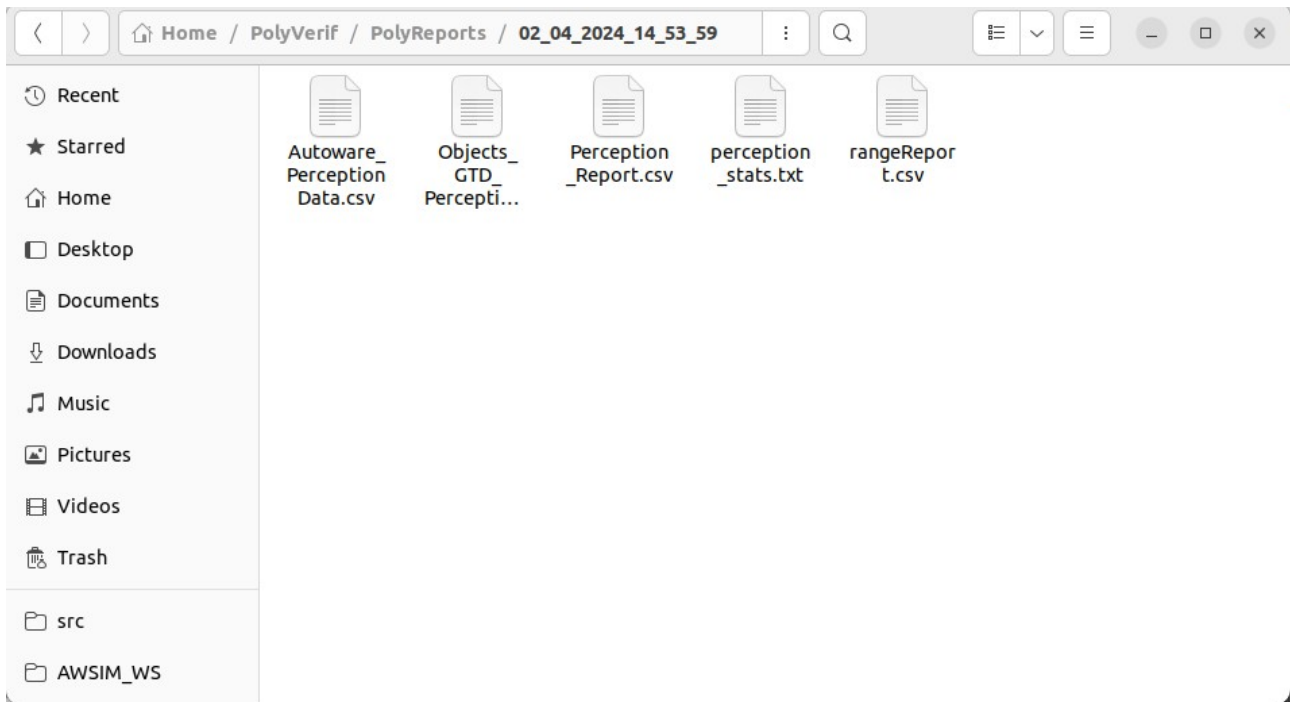
7.To generate reports run the report generation script using cmd \$
./reportGenerateDetection.sh



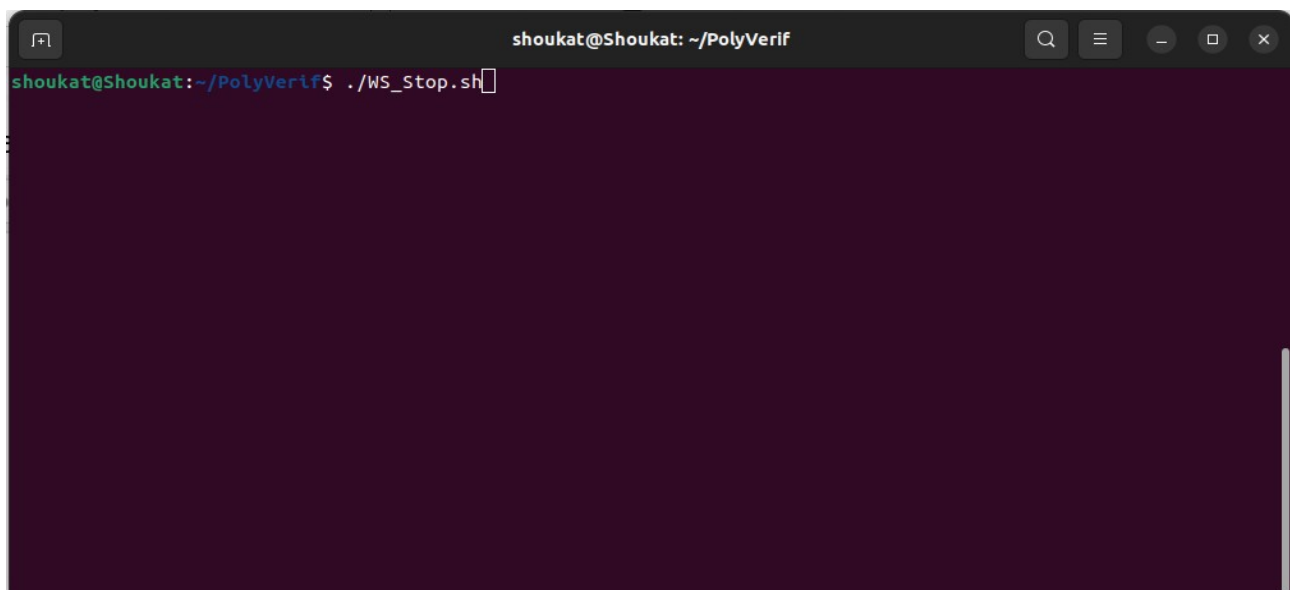
The terminal window shows the user 'shoukat' at the prompt 'shoukat@Shoukat: ~/PolyVerif'. The user has executed the command './reportGenerateDetection.sh', which has resulted in a blank terminal screen.

```
location : /home/shoukat/PolVerif
Entering in Detection Params
Entering in TimeStampMatching function
Exiting from TimeStampMatching function
Entering in TimeStampMatching function
Exiting from TimeStampMatching function
Entering in ObjectDetectionRate function
-55.64727203691406 -4.4389511585235596 0.218378946185112 -34.29996463623047 -4.586879730224669
-10.563093185424805 -4.55264091491699 -0.0483923606875896 -10.684223175048828 -4.584682464599609
-36.75817108154297 -4.352698802947998 -0.28542627066075668 -35.469379425504883 -4.3096923828125
-10.463041305541922 -4.4519100181920898 -0.0475785098969936 -10.516563723022461 -4.574995040893555
-36.3606673278809 -4.448498249053935 -0.04674314657956218 -10.337932420715332 -4.50187860551936
-38.77918701171875 -4.279142379760742 -0.2497514635324478 -38.61344146728516 -4.193598518371582
-10.263108253479004 -4.55116519912979785 -0.0458747930824756 -10.338754653930664 -4.559525644381445
-10.163082122802734 -4.44172477722168 -0.0450450032949447 -10.122270584106644 -4.366869926452637
-10.06308937072754 -4.438337802886963 -0.0425157089710235 -9.984848022466938 -4.37811994526123
-9.963122367858888 -4.434968948364258 -0.0433715805411338 -9.83937931060791 -4.363120079040527
-36.3096237182615 -4.43157674820801 -0.0425417907536029 -9.78437995910444 -4.367495059967041
-80.80396237182615 -4.43157674820801 -0.0425417907536029 -9.753656387329102 -4.364509105682373
-9.663121234497909 -4.424790859222412 -0.0408527627587318 -9.7203168860901855 -4.38437302699585
-9.56309700012207 -4.421399593323272 -0.0399009138345718 -9.47750473022461 -4.381245136260986
-9.463157653089584 -4.418048858642578 -0.0388130955398082 -9.4445362609106444 -4.396245002746582
-9.363143920809398 -4.41646571844482 -0.0377240069210529 -9.379379272460938 -4.34874534606936
-9.263189315795898 -4.4112453712299895 -0.03766358384499013 -9.3104734248027637 -4.36939983673996
```

7. Find the generated reports in dir path as shown below



8. To Stop workspace using \$./WS_stop as shown below.



9. From above steps DetectionNode pipeline completed and for other pipelines follow same steps as earlier performed.