

Visual Place Recognition #754

New issue

Closed

sujiwo wants to merge 2 commits into develop from feature/place\_recognizer

Conversation 34

Commits 2

Checks 0

Files changed



sujiwo commented on Aug 1, 2017

This is a new feature for visual place recognition based on ORB-SLAM

Visual Place Recognition

174e322

dejanpan requested review from kitsukawa and removed request for kitsukawa 7 years ago



dejanpan commented on Aug 1, 2017

@sujiwo thx a lot for the PR. Could you maybe provide a little bit more information about the PR following this template:  
<https://github.com/CPFL/Autoware/blob/develop/docs/pull-request-template.md>.  
  
thx

Uncommitted files

a23a6f2



sujiwo commented on Aug 1, 2017

Author

Status

Development

Description

Reviewers

dejanpan

Assignees

No one assigned

Labels

type:new-feature

version:autoware-ai

Projects

None yet





Milestone

No milestone

Development

Successfully merging this pull request may close these issues.

4 participants



This PR features a new visual place recognizer which may be useful for initializing localization in other nodes such as NDT (ie. it performs global localization like GPS), only using vision. To be succesful, map of the place with global coordinate is required. This map can be created using orb\_mapping node as part of orb\_localizer.

## Next Works

- ☐ Performance Evaluation
- ☐ Testing



**dejanpan** commented on Aug 1, 2017 via email

Can you also comment how can we test it? Which launch file to start? What rosbag to play?



**sujiwo** commented on Aug 1, 2017

Author

## Testing

1. Obtain a bag file and corresponding ORB-SLAM map; the bag file must contains image stream
2. Launch place\_recognizer.launch:

```
roslaunch orb_localizer place_recognizer.launch  
orb_config:=<path-to-orb-slam-config.yaml>  
map_file:=<path-to-orb-map> image_topic:=  
<image_topic>
```



3. Play the bag

## Expected Results

Pose output in /<camera\_namespace>/pose



**yk-fujii** mentioned this pull request on Mar 14, 2023

**Release v.1.4.0**

Closed

autowarefoundation/autoware\_ai#953

10 tasks



dejanpan suggested changes

[View reviewed changes](#)

on Aug 2, 2017

ros/src/computing/perception/localization/packages/orb\_localizer/README

```
18 + (change indigo to your ROS version)
19 + The default values are:
20 + _TIMEOUT_SIGINT = 15.0 #seconds
21 + _TIMEOUT_SIGTERM = 2.0 #seconds
```



dejanpan on Aug 2, 2017

this is not a very elegant solution to edit stuff in /opt/ros/indigo/lib/python2.7. Do you mean a SIGINT as a result of Ctrl+C or where does SIGINT come from?



sujiwo on Sep 22, 2017

Author

At this time I do not have good solution for this, because saving large ORB map eats too much time.

ros/src/computing/perception/localization/packages/orb\_localizer/include/Map.h

```
100 101
101 102 struct MapFileHeader {
102 103     char signature[7];
104 + unsigned char
105 + hasImage;
```



dejanpan on Aug 2, 2017

Why not a bool?

ros/src/computing/perception/localization/packages/orb\_localizer/include/Tracking.h

```
99 + // { return mpIniORBextractor; }
100 + //
101 + // cv::Mat getCalibrationMatrix
102 + // { return mK; }
```



dejanpan on Aug 2, 2017

dead code, should we remove?

ros/src/computing/perception/localization/packages/orb\_localizer/nodes/common.cpp

```
222 + if (imgenc::isBayer(imageMsg->encod
223 + int code=-1;
224 + if (imageMsg->encod
225 + imageMsg->en
```



**dejanpan** on Aug 2, 2017

curly bracket into new line?

```
ros/src/computing/perception/localization/packages/orb_localizer/nodes/common.cpp
```

```
239 +         }
240 +         cv::cvtColor(cv_ptr->
241 +         }
242 +         else
```



**dejanpan** on Aug 2, 2017

curly bracket after else

13 hidden conversations

[Load more...](#)

```
...g/perception/localization/packages/orb_localizer/nodes/place_recognizer/place_recognizer.cpp
```

```
215 +     {
216 +         for(int i=0; i<nKFs;
217 +         {
218 +             if(vcDiscard
```



**dejanpan** on Aug 2, 2017

everywhere with single line ifelse I would put {}

```
...g/perception/localization/packages/orb_localizer/nodes/place_recognizer/place_recognizer.cpp
```

```
260 +
261 +         for
262 +
263 +
```



**dejanpan** on Aug 2, 2017

put {} in "for" and "if"

```
...g/perception/localization/packages/orb_localizer/nodes/place_recognizer/place_recognizer.cpp
```

```
263 +
264 +
265 +         //
266 +         if(
```



dejanpan on Aug 2, 2017

why 50? could you make it a parameter?

```
...g/perception/localization/packages/orb_lo  
calizer/nodes/place_recognizer/place_recogni  
zer.cpp
```

```
288 +  
289 +  
290 +  
291 +
```



dejanpan on Aug 2, 2017

```
}
```

```
ros/src/computing/perception/localization/pa  
ckages/orb_localizer/src/Map.cc
```

```
226 +  
227 +         if (saveKeyframeImages) {  
228 +             string imageDir = ma  
229 +             boost::filesystem::c
```



dejanpan on Aug 2, 2017

I would check if imageDir exists



dejanpan commented on Aug 2, 2017

I reviewed but didn't test. Can you provide link to an example bag file?



yk-fujii mentioned this pull request on Mar 14, 2023

**Release v.1.5.0**

🔒 Closed

autowarefoundation/autoware\_ai#958

📋 20 tasks



dejanpan commented on Aug 25, 2017

@sujiwo you did not reply to any of my comments. If you can not / don't have time to fix also OK => just say so.

Do you have a publicly available ORB map and a corresponding image bag that I could test this with?



dejanpan self-assigned this on Aug 25, 2017



**dejanpan** commented on Aug 28, 2017

[@sujiwo](#) just a friendly reminder



**sujiwo** commented on Sep 22, 2017

Author

Sorry [@dejanpan](#) for very long time, I'm currently working on this.



**gbiggs** commented on Mar 15, 2019

[@sujiwo](#) [@dejanpan](#) Is this PR still applicable?



**gbiggs** added **type:new-feature** **in review** labels on Mar 15, 2019



**sujiwo** commented on Mar 15, 2019 via email

Author

Unfortunately, No. It depended on ORB Localizer, which has been removed.

Pada tanggal Jum, 15 Mar 2019 pukul 15.29 Geoffrey Biggs <notifications@github.com> menulis:

...



**gbiggs** closed this on Mar 17, 2019



**amc-nu** deleted the **feature/place\_recognizer** branch 5 years ago



**gbiggs** unassigned **dejanpan** on Mar 24, 2019



**mitsudome-r** added the **version:autoware-ai** label on Jun 14, 2022