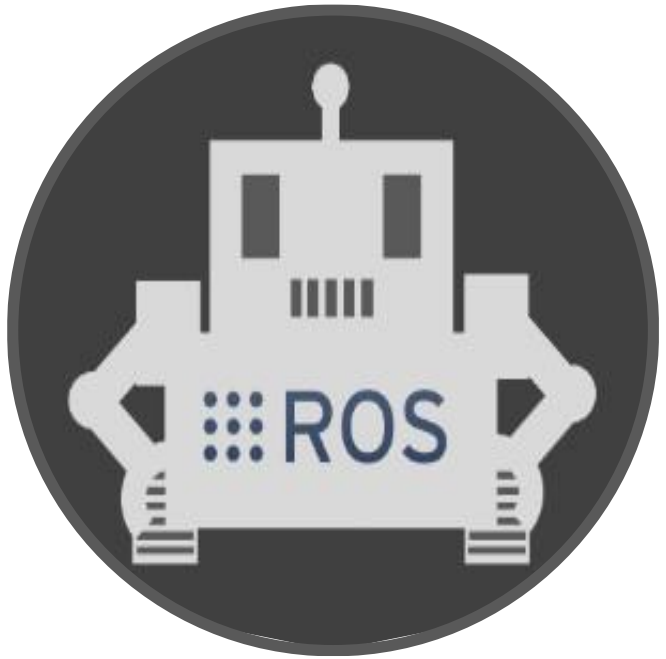
ROS 기초 강의

Chapter 11. 실력 상승 노하우

구선생 로보틱스



Update 20240620

강의 자료 다운로드

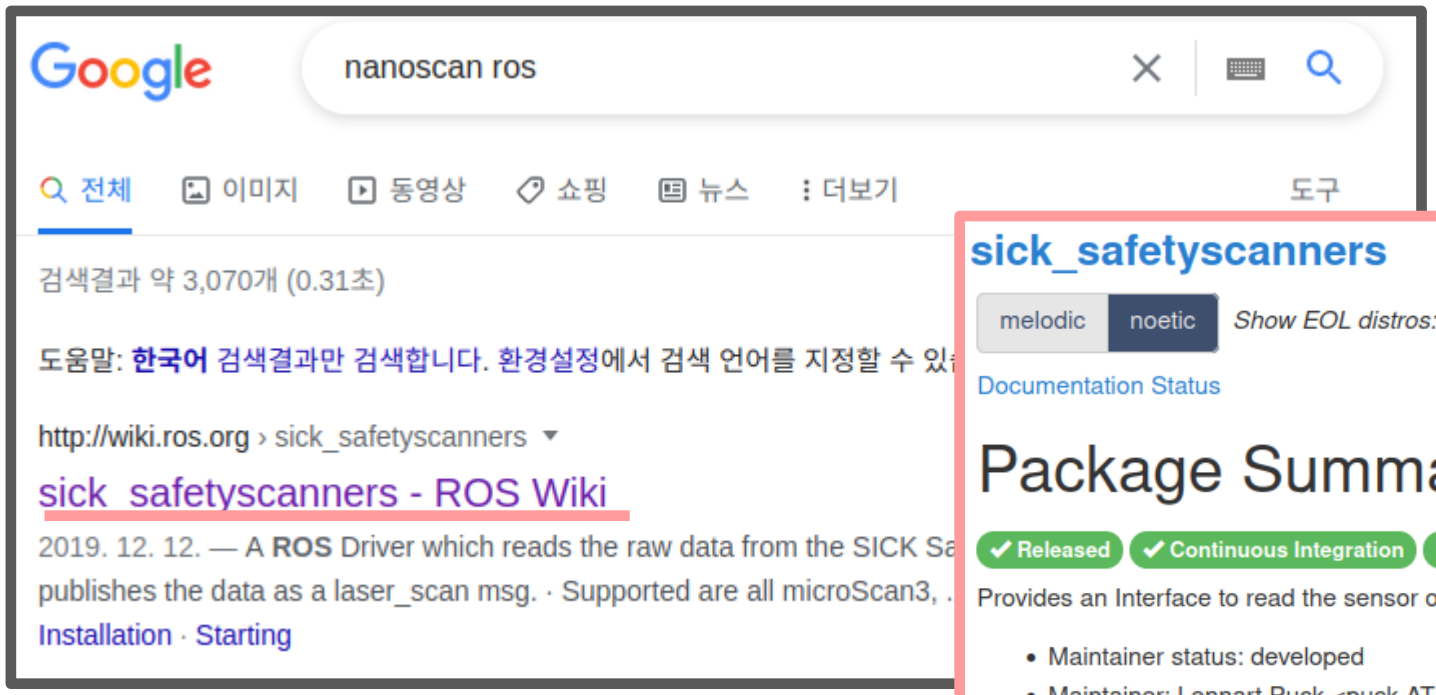
ROS 기초 강의 강의노트

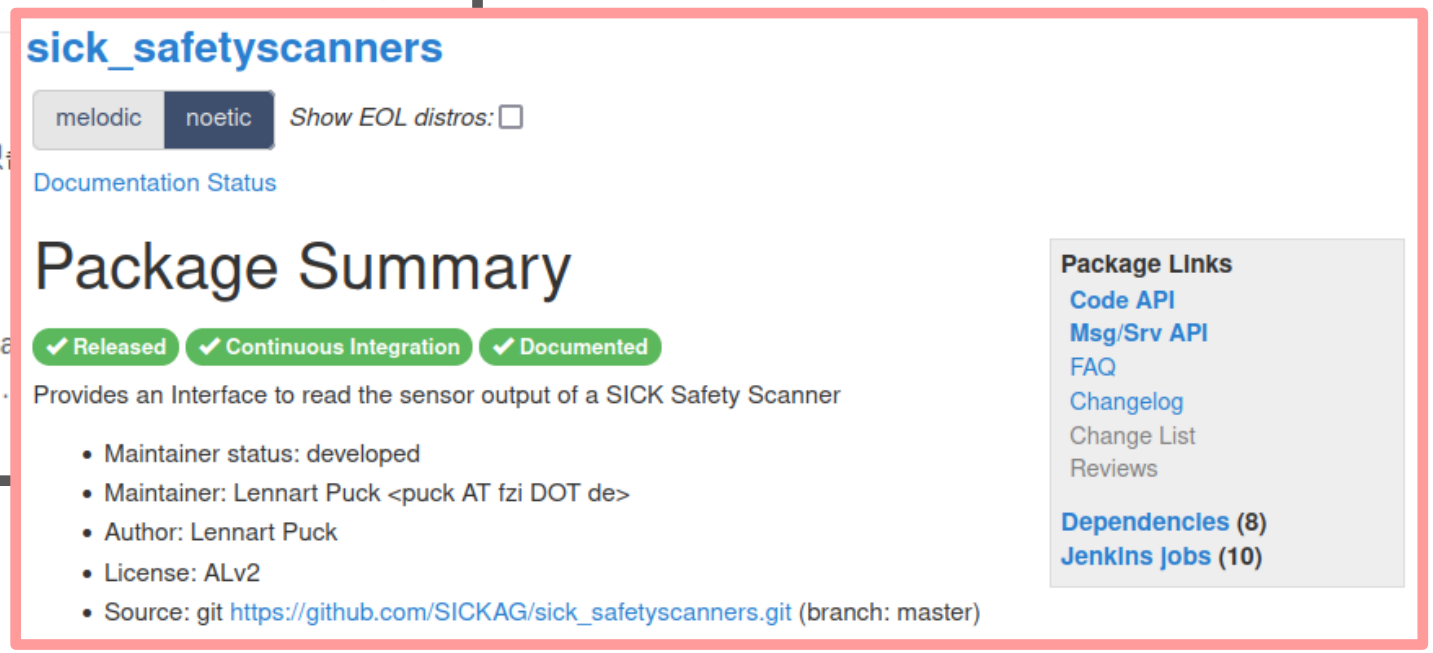
https://drive.google.com/drive/folders/1rRwS2j98HNyj5Is_yVXEGj30ILvMPtrz?usp=drive_link

ROS 실력 상승 노하우

ROS Wiki 활용

동영상 강의 - 마무리
https://youtu.be/3k7oYeeaRhI?si=sq6_IyoWkkxjnszF





로봇 관련 패키지가 필요할 경우 해당 검색어 + ros 를 검색하면
대부분 ros wiki 문서가 있다.

ROS 실력 상승 노하우

Readme 문서 정독

Getting started

The ROS driver will be released as a debian package, and therefore can be installed from binaries or from source.

Prerequisites

- Linux
- Working ROS-Distro
- Correctly setup SICK Safety Scanner
- Connected SICK Safety Scanner and a correctly setup ethernet network. Both the host and the sensor have to be in the same network.

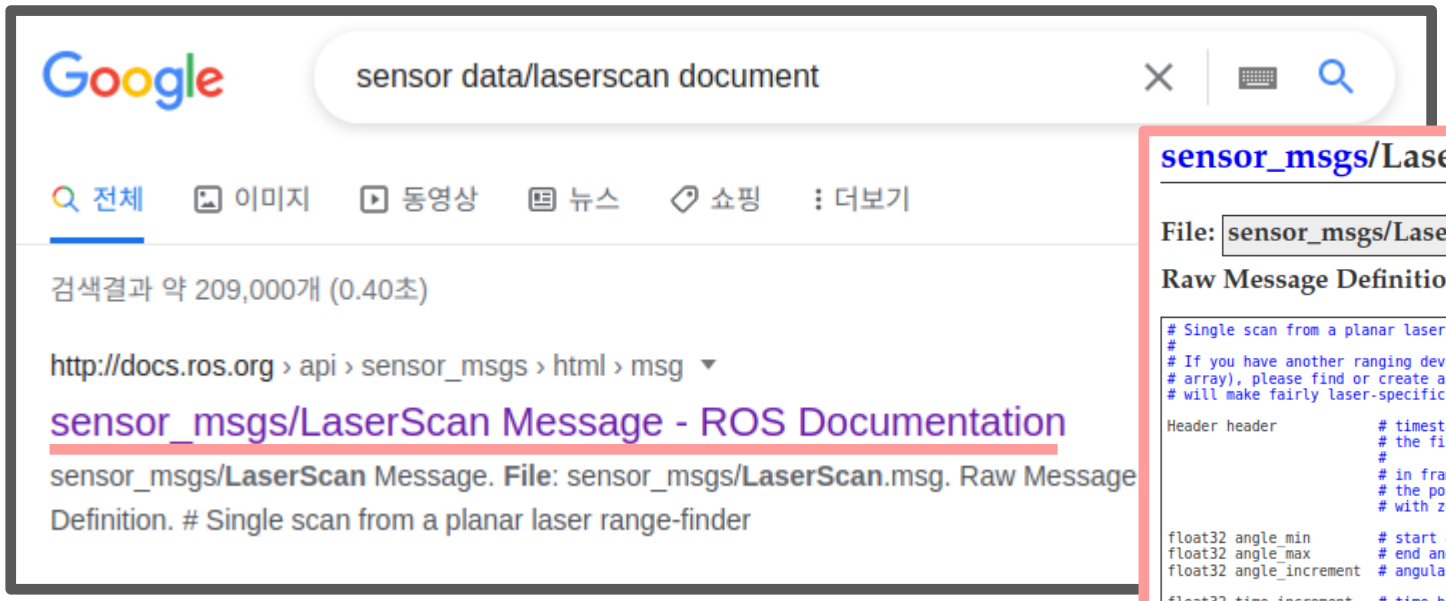
Installation

In the following instructions, replace `<rosdistro>` with the name of your ROS distro (e.g., `kinetic`).

처음보는 패키지 사용시 Readme 문서를 따르는 것이 베스트이다

ROS 실력 상승 노하우

Document 검색



sensor_msgs/LaserScan Message

File: sensor_msgs/LaserScan.msg

Raw Message Definition

```
# Single scan from a planar laser range-finder
#
# If you have another ranging device with different behavior (e.g. a sonar
# array), please find or create a different message, since applications
# will make fairly laser-specific assumptions about this data

Header header            # timestamp in the header is the acquisition time of
                         # the first ray in the scan.
                         #
                         # in frame frame_id, angles are measured around
                         # the positive Z axis (counterclockwise, if Z is up)
                         # with zero angle being forward along the x axis

float32 angle_min        # start angle of the scan [rad]
float32 angle_max        # end angle of the scan [rad]
float32 angle_increment  # angular distance between measurements [rad]

float32 time_increment   # time between measurements [seconds] - if your scanner
                         # is moving, this will be used in interpolating position
                         # of 3d points
float32 scan_time        # time between scans [seconds]

float32 range_min        # minimum range value [m]
float32 range_max        # maximum range value [m]

float32[] ranges         # range data [m] (Note: values < range_min or > range_max should be discarded)
float32[] intensities    # intensity data [device-specific units].  If your
                         # device does not provide intensities, please leave
                         # the array empty.
```

ROS 내부의 자료형 및 소스코드를 알고 싶을 시
해당 키워드 + document라고 검색 시 자료가 나온다

ROS 실력 상승 노하우

ROS info 명령어 활용

1) Ros topic 정보

```
$ rostopic info <토픽_이름>
```

2) Ros node 정보

```
$ rosnode info <노드_이름>
```

3) Ros service 정보

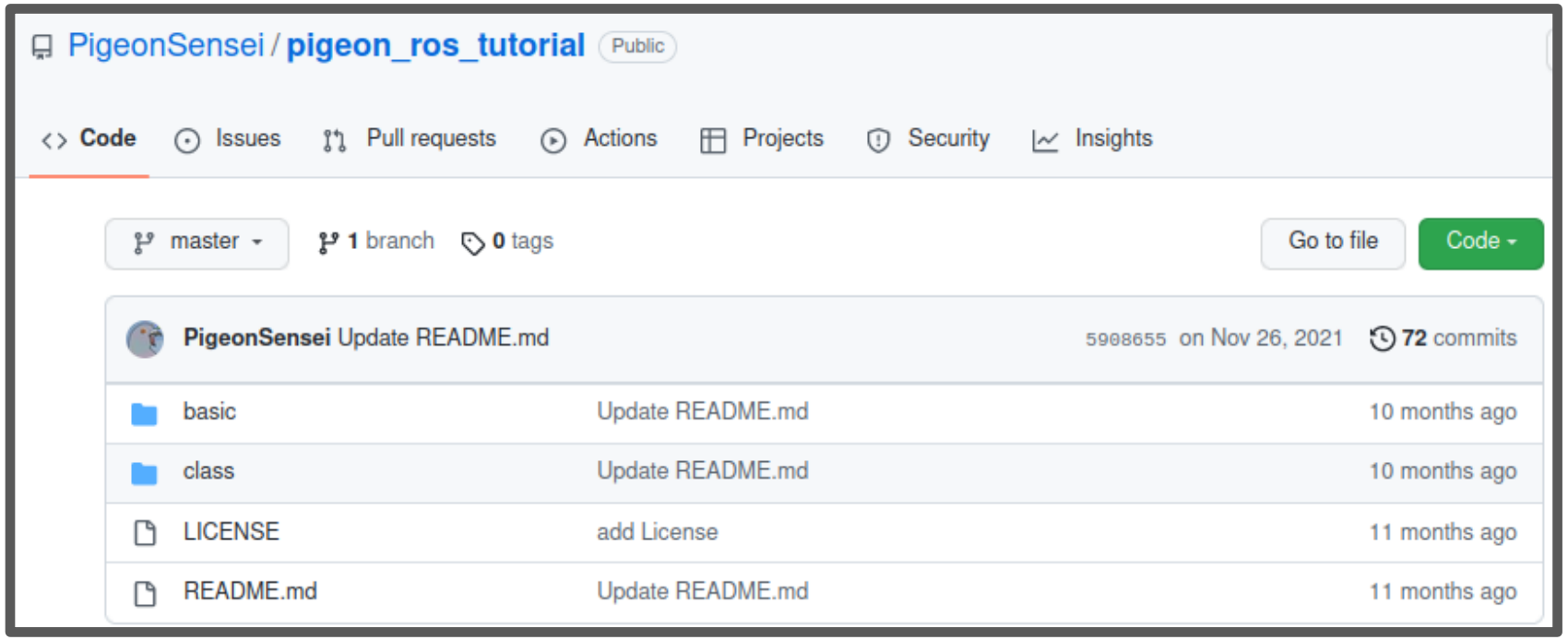
```
$ rosnode service <서비스_이름>
```

Info 명령어를 이용하면 패키지를 쉽게 분석할 수 있다.

ROS 실력 상승 노하우

ROS info 명령어 활용

ROS 레퍼런스 소스코드
https://github.com/PigeonSensei/pigeon_ros_tutorial



ROS 소스코드 레퍼런스를 활용하면 쉽게 프로그래밍 가능하다.

감사합니다

구선생 로보틱스