cmake\_minimum\_required(VERSION 2.8.3) 版本

project(lego\_loam) project名稱

set(CMAKE\_CXX\_FLAGS "${CMAKE\_CXX\_FLAGS} -std=c++11 -O3")

匯入用的ros package

find\_package(catkin REQUIRED COMPONENTS

tf

roscpp

rospy

cv\_bridge

image\_transport

pcl\_ros

pcl\_conversions

std\_msgs

sensor\_msgs

geometry\_msgs

nav\_msgs

cloud\_msgs

)

find\_package(GTSAM REQUIRED QUIET)

find\_package(PCL REQUIRED QUIET)

find\_package(OpenCV REQUIRED QUIET)

這是一個catkin提供的cmake巨集，當我們要給構建系統指定catkin的特定的信息時就需要了，或者反過來利用他產生pkg-config和CMake文件。

catkin\_package(

INCLUDE\_DIRS include

CATKIN\_DEPENDS cloud\_msgs

DEPENDS PCL

)

include\_directories(

include

${catkin\_INCLUDE\_DIRS}

${PCL\_INCLUDE\_DIRS}

${OpenCV\_INCLUDE\_DIRS}

${GTSAM\_INCLUDE\_DIR}

)

這個函數用來添加額外的庫的路徑，然而，這並不鼓勵使用，因為所有的catkin和cmake的package在使用find\_package時就已經自動的有他們的鏈接信息。

link\_directories(

include

${OpenCV\_LIBRARY\_DIRS}

${PCL\_LIBRARY\_DIRS}

${GTSAM\_LIBRARY\_DIRS}

)

可執行target 四大CPP文件

add\_executable(imageProjection src/imageProjection.cpp)

add\_dependencies(imageProjection ${catkin\_EXPORTED\_TARGETS} cloud\_msgs\_gencpp)

target\_link\_libraries(imageProjection ${catkin\_LIBRARIES} ${PCL\_LIBRARIES} ${OpenCV\_LIBRARIES})

add\_executable(featureAssociation src/featureAssociation.cpp)

add\_dependencies(featureAssociation ${catkin\_EXPORTED\_TARGETS} cloud\_msgs\_gencpp)

target\_link\_libraries(featureAssociation ${catkin\_LIBRARIES} ${PCL\_LIBRARIES} ${OpenCV\_LIBRARIES})

add\_executable(mapOptmization src/mapOptmization.cpp)

target\_link\_libraries(mapOptmization ${catkin\_LIBRARIES} ${PCL\_LIBRARIES} ${OpenCV\_LIBRARIES} gtsam)

add\_executable(transformFusion src/transformFusion.cpp)

target\_link\_libraries(transformFusion ${catkin\_LIBRARIES} ${PCL\_LIBRARIES} ${OpenCV\_LIBRARIES})