

请使用 Ubuntu 20.04 进行测试。

需要先安装 OpenCV 库。

```
1 sudo apt install libopencv-dev
2 sudo apt install libopencv-core4.2
3 sudo apt install libopencv-core-dev
```

然后加入 `WEBOTS_HOME` 环境变量。可以加在 `~/.profile` 中，然后 `source ~/.profile`。也可以在一个终端中 `export` 后再编译控制器（不要重新用另一个终端）。

```
1 export WEBOTS_HOME=/usr/local/webots
```

最后，controller 在 `FinalProject/controllers` 下，`cd` 到某个 controller 的目录下后，`make clean` 且 `make` 即可重新编译 controller。

```
lixx28@ubuntu: ~/Introduction-to-Robotics/Project
> cd FinalProject/controllers/my_controller1
lixx28@ubuntu: ~/Introduction-to-Robotics/Project/FinalProject/controllers/my_controller1
> make clean && make
# updating my_controller1.d
# compiling my_controller1.cpp
my_controller1.cpp: In function 'bool needPlan(cv::Mat, std::vector<point>, point)':
my_controller1.cpp:249:21: warning: comparison of integer expressions of different signedness: 'int' and 'std::vector<point>::size_type' {aka 'long unsigned int'} [-Wsign-compare]
  249 |     for (int i = 0; i < path.size() - 1; i++)
      |                      ~~~~~^~~~~~
my_controller1.cpp: In function 'int main(int, char*)':
my_controller1.cpp:372:37: warning: comparison of integer expressions of different signedness: 'size_t' {aka 'long unsigned int'} and 'int' [-Wsign-compare]
  372 |         for (size_t i = outlierCnt; i < lidarRes - outlierCnt; ++i)
      |                                   ~~~~~^~~~~~
my_controller1.cpp:377:42: warning: comparison of integer expressions of different signedness: 'int' and 'size_t' {aka 'long unsigned int'} [-Wsign-compare]
  377 |         for (int k = i - outlierCnt; k < i + outlierCnt; ++k)
      |                                   ~~~~~^~~~~~
my_controller1.cpp: In function 'std::vector<point> astar(int (*)[1002], std::vector<point>, point, point)':
my_controller1.cpp:138:15: warning: control reaches end of non-void function [-Wreturn-type]
  138 |     vector<int> openSet;
      |           ^~~~~~
# linking my_controller1
# copying my_controller1
lixx28@ubuntu: ~/Introduction-to-Robotics/Project/FinalProject/controllers/my_controller1
>
```