

CSCI Project: Test 2 – Using Stereo To Learn Traversable and Non-Traversable Terrain

In this test you will use stereo labels of traversable and non-traversable ground in the near field (< 15 meters), to label the entire image as traversable or non-traversable. You will use the first image to decide on which features you will use and which learning algorithm you will use, on subsequent images. You can either use hand label data to do this, or just the stereo labeled data.

The code you need to hand in is in the ProjectCode directory (and ONLY this directory). I have implemented a simple Nearest Neighbor algorithm and arbitrarily chosen the first feature type. Therefore, you already have working code; your task is to improve on this working code. You are free to choose any set of learning algorithms to experiment with. In the file ProjectCode/init.m you will choose one from amongst these algorithms given the first image, and choose which features you will use. Then only this learning algorithm will be used on subsequent images.

The code you will download has an initial set of images. More images will be put on the web later this month.