

Guide to Position Paper 3

This position paper is all about *explaining* and *evaluating*. Please consult the Grading Matrix!

Using Session activities (the best option)

Start off with a short paragraph discussing the importance of robot navigating through an environment. The link to the book (UNIT3 section on the workshop page) is a good source. Cite this book, or follow-up some references in the book. This will hit the requirement to include journal articles.

Three navigation activities were provided, all using different approaches: Braitenberg used light sensors to drive motors to navigate towards the light. Line-following used vision to navigate by following a line. Potential fields used forces from obstacles to steer the robot away from the obstacle while heading to the target light.

You only need to explain one in detail, then to explain the strengths and weaknesses, you could compare it with another. Or you could just provide your opinion, perhaps based on observing the navigation success.

The worksheets include 'investigation' activities. This will give you some results – how the robot behaves, and these could be used as a source of explanation.

You need to include some annotated code to support your explanation. This needs to be the code you have written, though if it calls other supplied functions, you should explain the *function* of these functions (not how they work, unless you really want to).

Research-based (emergency option)

If you cannot get access to Webots due to problems, then it is possible to write a paper based on research. The link to the book will provide you with a wealth of information. The problem with this option is that you will have to find some code, and discuss this.