Personal Assistant: Research Report

Introduction to Mobile Robotics > End of Project Activities > Research Report

Assignment

As you approach the end of this phase of research for your Personal Assistant robot, it is time for you to document your findings for future reference by writing up a research report. A research report draws from your own experiences as well as outside resources (book, papers, etc.) to explain what you have done and what you have found out. Choose from one of the topics below, or create your own topic and ask your teacher to approve it before you start writing.

Topic choice 1: What is a robot?
In your research, you spent a lot of time with the robot. What is a robot? What makes it a robot and not just any old machine? Is your Personal Assistant robot a good example? Explain and give examples.

Topic choice 2: How are Science, Technology, Engineering and Math related?
The activities you participated in used elements from many different disciplines together to accomplish specific goals. Give one example of (choose one):
- A science concept or technique used to accomplish a goal
- A mathematics concept or technique used to accomplish a goal
- A technological concept, technique, or artifact used to accomplish a goal

Explain how the concept, technique, or artifact helped to accomplish the common goal. Finally, summarize in your own words how science, technology, and mathematics work together in order to accomplish real-world objectives.

Topic choice 3: Experience and Insight
Discuss one specific experience you had while working on the robotics activities that helped you to understand something important about math, science, technology, engineering, communication, teamwork, or any other area you believe is relevant. What did you learn? How might this knowledge help you to deal with new challenges in the future?

Topic choice 4: Summary and Conclusions
Recap what you and your group have done with the Personal Assistant robot. Discuss significant realizations, conclusions, and lessons learned during your robot development. Summarize what you think are the most important things to know about robotics, and explain why.

Details

Your research publication should be 2-4 pages long, double-spaced, in Microsoft Word or other similar format. Your report should be professional in tone and style, and incorporate information from other robotics research when appropriate. You should make effective use of illustrations and other visual aids (charts, graphs, etc.) wherever appropriate.

This is an individual assignment. You may talk with your team members to analyze and discuss your group's work on the robot, but all work done on your paper *must be your own.* It is appropriate to review and give feedback on other students' papers, to give credit to those who helped you, and to cite all references you used. It is not appropriate to share or take pieces of other students' reports to use in yours, to allow someone to copy yours, or to use pictures and/or other materials from outside sources without proper citation. If you have any questions about whether something is allowable, ask your teacher *in advance*.

Tips

- The audience for a research paper is usually your peers and colleagues. Write at an appropriate level so that someone who is familiar with the NXT can understand what you did in your research, and why.
- Be thorough, but not extremely wordy.
- Each topic asks you to address several distinct issues, but if you make use of good writing technique, your report should still flow smoothly from topic to topic; make sure that your message is communicated clearly and simply.
- Write multiple outlines and drafts and have them reviewed by peers and teachers. It makes a big difference.
- Use quotes from other books or papers to back up what you are saying. A good report writer will back up their statements with citations from other authors and sources. This additional research gives more emphasis to your ideas and declarations.

Deadlines

Rough Outline:

Revised Outline:

Rough Draft:

Revised Draft:

Final Draft: