

CENG 6533 Robotics

Homework 7 Klafter Ch 7 Spring 2015

Due April 22

Dr. T. L. Harman: 281 283-3774 Office D104

Research: 50 points

1. Write a brief report on the progress in Robot Software. Try National Instruments, Microsoft and a few commercial companies. Distinguish between standard languages (C, etc) and languages specifically for Robot control.

Search the WEB or other sources and create a table. Give the specifications and cost of the software if available.

NOTE: List all references - the web URL, books, etc. Make a comment on the references and include the date of the reference. (10 points of the 50)

2. 50 Points

A NASA employee sent me this request for information:

I would like to know if you could point me to some sources of information concerning system safety of robotic systems? I would like to know more about robotic system interaction when using robots in close proximity of humans? I want to make sure I cover all concerns ... mechanical motion, how systems are saved in event of a problem ... etc.

I took your robotics class many years ago and remember you had an in-depth interest in robotic programming.

1. **Write a short report on robot safety considerations. Include the safety considerations for dangerous industrial robots needing specific safety measures. List references (25 points)**
2. **Write a paragraph or two on the new collaborative robots such as Baxter. (25 Points)**

Read the report on our Web site:

<http://sceweb.sce.uhcl.edu/harman/CENG5931Baxter2015/collaborative-robots-kuka-baxter-abb.pdf>

Write a paragraph or two on the new collaborative robots such as Baxter. See Appendix 1 and compare Baxter and Sawyer.